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RESPONSIBILITY OF MEDICINE

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IN these days when after three years of total war, we are beginning to see a rift in the clouds and are justified in the hope that the war's end is not too far distant, it is proper that all groups of our citizens should be thinking of the postwar period. Our profession can point with pride to its contribution to the war effort. Fully 60,000 of its members have entered the military services and have given fully of their talents, and many their lives, in order that the forces which oppose us may be conquered and some, if need be, destroyed. Those who have remained to serve the home front have given their all to supply medical service, many with sacrifice of health and even of life. What will the world be like when this holocaust is over? To what kind of a United States will our colleagues who are in the service return? Will the practice of medicine as our predecessors developed it, survive, or will it be caught in the tide of social change that has been swelling for a decade and is being accentuated by the war? The answers to these questions may of necessity be vague, as yet, but the problems these questions raise demand the careful study of, and mature judgment in, their solution by every practitioner of medicine.

The medical profession is, I believe, committed to one objective, which is contained in the platform of the American Medical Association, "*Availability of Medical Care of a High Quality to Every Person in the United States.*" This objective implies the quality and distribution of medical care. The former involves medical training,

undergraduate, graduate and postgraduate. The latter involves economic and social problems.

Is there anything wrong with the quality of American medicine today, and, if so, can anything be done about it? Having graduated in medicine only twenty-two years ago, it may be presumptuous on my part to discuss this particular phase of the problem. However, the nature of my specialty, pathology, and the interest I have tried to take in the public relations of organized medicine, and in medical legislative matters in my State, have led me to the conclusion that the standard of medical practice in this country is not what it should and could be. I will insist, with you, that it is the best in the world. But is that good enough? One might argue that our shortcomings are completely overshadowed by our daily successes, but if we analyze the viewpoints of our critics, who both in and out of Government circles, have a powerful influence over public opinion, we will find too often, I am sorry to admit, that they have either had an unfortunate personal experience with doctors or know of some friend or acquaintance who has had one. As a rule this episode, when divulged, involves a sin of omission rather than one of commission. Too many early cancers are being overlooked because the physician either did not know the early signs of hidden malignancies or was reluctant to refer a patient to someone else for fear he might lose the patient; diabetes is frequently unrecognized simply because a urinalysis was not done. If this thesis is correct, and I believe it is, we must assume the responsibility for improving the

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standard of medical practice in the postwar period. Surveys among medical officers indicate two definite opinions in their minds; the overwhelming majority want to return to private practice as soon as possible, and fully 80 per cent desire a course of some sort to refresh their memories of, and to acquaint them with, the progress made in the diagnosis and treatment of civilian ailments. A large number of these men, possibly fifteen thousand, will never have practiced a day when they are released from the service. The remainder have dealt almost exclusively, while in uniform, with age groups and medical problems which will be uncommon in their private practices. Where will they go for their postwar courses, short or long? The Council on Medical Education and Hospitals estimates that the number of residencies, especially in medicine and surgery, will have to be doubled. This will mean effective co-operation on the part of hospitals and their medical staffs. Hospitals which trained few if any interns or residents in the past will have to take stock of their facilities and expand them if possible. The need for an effective appeal by organized medicine to its members to assist in this great effort is apparent if the returning medical officer is to receive the consideration he is entitled to, and the public he will later serve is to receive a high quality of medical service.

Unfortunately, the problem does not end there. The rank and file of practitioners in civilian practice, both middle aged and elderly, must be encouraged to attend medical meetings and refresher courses. It is the responsibility of organized medicine to see to it that these courses and meetings stress the practical rather than the theoretical. Recourse to the undergraduate form of teaching, in which the fundamentals of diagnosis and treatment are emphasized again, and again, and again, may have to be resorted to in many instances.

What about the medical education of the future? I believe we not only have the right to be concerned over this problem, but it is our duty to help guide, if possible, the trends in medical education. The Council on Medical Education and Hospitals has done a magnificent job in eliminating diploma mills and inferior schools, and has set a high standard for the present-day medical school to attain. But has the medical graduate in recent years been sufficiently equipped during his schooling and hospital experience to establish and

maintain a high quality of medical service? Is there any virtue to the argument that the recent graduate has been exposed to too much science and too little of the practical, and that the art of medicine has been almost entirely neglected? From experience with quite a number of medical neophytes, I believe there is. Medical educators are not alone to be blamed for this condition for they are subject to pressures from all sides to increase the scope of work to be covered, and especially by the tendency of us all to judge the excellence of a medical school by the research and papers it turns out rather than the knowledge of practical medicine with which its graduates leave the school. It would seem that the time has come when the doctors of this nation should interest themselves in the future of medical education and not leave it entirely in the hands of deans and professors, many of whom have had little or no experience in the private practice of medicine.

The second great problem confronting the medical profession is the distribution of medical care. Its solution involves economic and social problems. It is apparent that if the present wartime prosperity could be extended into the postwar period we would have little to worry about, for when people have plenty of money to spend, and especially if the supply of luxury items is limited, they will consult their physicians freely and will pay their medical bills gladly. However, no one except the impractical dreamer can hope for anything but a return of difficult times unless our leaders and experts, in and out of government, display a greater talent for dealing with economic problems than they have in the past. When the leveling off process does arrive, whether it be sooner or later, there will be increased demands for extensions of medical services. The Wagner-Murray Bill in its present form will probably be defeated but there will be other health bills introduced. They will undoubtedly follow the trend of social changes which is gradually sweeping the world and is threatening to liberalize even conservative England.

What are the causes of this attack upon the private practice of medicine and is it the responsibility of medicine to remove them? One factor is the uneven distribution of physicians in which physicians tend to concentrate in the larger centers of population. The emphasis on specialization in medicine has been a contributory factor. But the absence of adequate hospital and diagnos-

tic facilities and consultants, plus the desire on the part of most physicians to live near to recreational, cultural, and educational advantages has discouraged young physicians from settling in small communities. It has also driven many practitioners from the small community to the larger center. In the smallest communities the refusal of the people to patronize the hometown doctor and their tendency to drive to the larger centers for medical care has forced the physician to move elsewhere. Will the plans proposed by the United States Public Health Service for the establishment of diagnostic centers in the smaller communities entice physicians to them? I doubt it, for at best such diagnostic centers cannot satisfy all the objections to this type of practice. Nor will they insure the patronage of the citizenry provided it has gasoline and tires to travel to the larger centers for medical care.

The medical profession faces the responsibility of preventing ill-advised cures for this condition, which are being proposed by some high government officials and loudly acclaimed by the "well doers." For if the "plans" materialize and then fail, the profession will be blamed for their failure.

What can the medical profession do about this problem of unequal distribution of physicians? It can and should emphasize to the public the important role played by the general practitioner in the general health picture. It can also encourage the development of better highways for the farmers and the establishment of low-cost ambulance service so that any person, regardless of location, can be transported to a center in a matter of minutes or a few hours. In addition it can consider ways and means of encouraging young medical graduates to settle in the smaller centers. In this connection, the great length of time necessary at present to complete a medical education and the expense involved has led some to believe that the problem cannot be solved unless the medical course is materially shortened. I would be the last in the world to advocate any change in this respect that would lower the standards of medical service, but I am fearful that some such changes will be forced upon us unless we, or others, do something to improve the situation.

Another factor in the problem of distribution of medical service is that of cost. Every survey of public opinion upon medical service which has been made lately indicates that the majority of the

people want some method whereby they can cushion the expense of a catastrophic illness. This is precisely what the planners would do through the Wagner-Murray Bill. Is it the responsibility of medicine to provide the pattern for repaid medical insurance and to subsidize it, or should the insurance companies assume this responsibility if government does not do it? Many of our medical leaders are earnestly opposed to it, while others believe that we must sponsor our own plan in order that the control of medicine will remain in the physicians' hands. The decision must be made only after all the problems involved have been carefully scrutinized and the experience of established service plans have been studied. Every physician must voice his opinion *before* a plan is instituted, but after it is adopted and placed in operation it is the duty of every physician to co-operate fully. If he fails to do so, the plan will fail and the profession as a whole will be discredited. Until private insurance companies enter the field of medical service insurance, it is the responsibility of medicine to at least study the feasibility of physician-sponsored plans, and, where they are in operation, to support them.

I am convinced that we as a profession must improve our relations with public health departments. There has been too much tendency in the past, at least in my State, for physicians to frown on any extension of health department facilities. I appreciate full well the apprehension on the part of most physicians, that such extensions are the entering wedge to state medicine. In some instances they can be so construed, but in most instances they are simply manifestations of the people's desire for more public health facilities.

The appalling rejection rate under the Selective Service System has focused the attention of the entire country on the health status of our young people. Unfortunately the figures have been used as a basis for an unjust criticism of the medical and dental professions. We all admit that medical care is an important factor contributing to better health but it is by no means the only one. Health education, sanitation, hygiene, diet and nutrition, infant care, and a proper recreational and physical fitness program, are equally important, if the health of the coming generation is to be improved. They fall within the province of public health officials as well as educators in our secondary schools, colleges and universities. The medical profession can assist the agencies

these people represent by supporting their programs. Have we done our part to reach an understanding with health officers and departments as to what constitutes legitimate public health activities and the private practice of medicine? We haven't done it as yet in our State. I believe we can get together; and when an agreement is reached we can give the health department unstinted co-operation in the furtherance of its program.

This inadequate analysis of the problems we face, will, I hope, stimulate some discussion at this Conference. It has been said that responsibility is a twin, and the name of its brother is opportunity. Our profession faces grave responsibilities but it also has great opportunities for service. The reward for our success will accrue to the people whom we serve, and the profession which we love.

ESSENTIAL THROMBOCYTOPENIC PURPURA

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THE history of purpura goes back to the beginning of medical knowledge as Hippocrates in 400 B.C. was accredited as describing purpura associated with pestilential fevers. It is convenient to divide our knowledge of the hemorrhagic diseases into three phases. The first can be described as the important clinical contributions to our knowledge of the disease. In 1734, Hornung⁷ divided purpura into the simplex, febrile, and scorbutic types. Werlhof¹⁹, in 1735, described "morbus maculosus hemorrhagicus" as a separate entity. Schonlein¹⁶, in 1829, described purpura with joint involvement. Henoch⁶, in 1868, described purpura with gastro-intestinal symptoms. After these fundamental descriptions, further attempts to classify purpura on a purely clinical basis led to endless confusion.

The second phase consisted of contributions from the standpoint of hematology and surgery. In 1882, Bizzozero wrote his classical paper describing platelets and their role in the coagulation of the blood. Wright²¹, in 1906, proved that platelets arose from the megakaryocytes of the bone marrow. Duke⁵, in 1912, showed the importance of the determination of the bleeding time and its interrelationship with the platelet count and clot retraction. Kaznelson⁸, in 1916, demonstrated the beneficial effects of splenectomy in essential thrombocytopenic purpura. The third phase is the present one, in which we are recognizing more and more etiological factors and attempting to advance our knowledge as regards the underlying pathological physiology involved.

¹⁹From St. Barnabas Hospital and the Department of Pathology of the University of Minnesota Medical School.

Classification

There is really no satisfactory classification of the purpuras. We can only classify them into two groups: idiopathic and secondary (Table I). It should be stressed that we can have a thrombocytopenia with many of the secondary purpuras. In general, any purpura with a platelet reduction is a more serious condition than one without a thrombocytopenia.

TABLE I. CLASSIFICATION OF PURPURA

- A. Essential thrombocytopenic (Werlhof)
- B. Secondary—with or without thrombocytopenia
 - 1. Blood dyscrasias
 - 2. Toxic
 - 3. Infections
 - 4. Vitamin deficiencies
 - 5. Allergy
 - 6. Splenomegaly
 - 7. Hereditary

In aplastic anemia and leukemia, purpura is common. It may be the first sign of leukemia. The hemorrhagic tendency in leukemia cannot be entirely placed on the basis of thrombocytopenia as purpura may be present in chronic myelogenous leukemia with an elevated platelet count. Hence we must in addition have a capillary factor. Many drugs, such as arsenicals, coal tar products, gold salts, benzol compounds, sulfonamides, and others can cause purpura. Purpura is not uncommon in uremia. Infectious diseases such as typhoid, small pox, meningococcal septicemia, and subacute bacterial endocarditis may show purpuric manifestations. Massive hemorrhage may occur in the adrenal glands in meningococcal septicemia and occasionally in other bacteremias. This is the so-called Waterhouse-Frideriksen syndrome. Vitamin C deficiency can cause bleeding of the gums

as seen in scurvy. Vitamin C appears essential as an intercellular cement substance. Szent-Gyorgyi¹¹, in 1936, isolated from red pepper and later lemon juice a substance other than ascorbic acid that appears to be related to capillary permeability. He called it vitamin P. Under the term, allergic or anaphylactoid purpuras, is a group of nonthrombocytopenic purpuras apparently on the basis of capillary insufficiency associated with one or more of the common manifestations of allergy such as erythema, urticaria, or effusions into subcutaneous tissues and the intestinal tract. They include Henoch's purpura with gastro-intestinal disturbances and Schonlein's purpura with joint involvement. Purpura due to hypersensitiveness to cold has been described by Peters and Horton.¹² We may later learn that food sensitiveness is responsible for some types of purpura. Some authors such as Wiseman²⁰ would exclude any case as essential purpura in which the spleen shows any appreciable enlargement. There is one type of nonthrombocytopenic purpura that occurs in both sexes and shows a familial tendency. This is the so-called pseudothrombocytopenia described by v. Willebrand in 1926.

Material

In the files of the pathology department of the University of Minnesota are the records of over 40,000 autopsies. There were ninety-nine cases listed as purpura. In reviewing these cases, one finds that the greater majority of them are examples of secondary purpura following such diseases as leukemia, meningococcal sepsis, bacterial endocarditis, scarlet fever, measles, et cetera. Some of them are examples of drug idiosyncrasies. After eliminating these cases, there remained thirty-six cases that belonged to the essential or idiopathic group. These occurred in otherwise normal individuals with no apparent cause. As the name implies, all showed a marked reduction in the platelet level. The average age of this group was 30.5 years and females predominated twenty-four to twelve males. This confirms the finding in the literature that essential thrombocytopenic purpura is a disease primarily of young people and that females show a marked preponderance. It is possible that the increased capillary permeability that precedes menstruation and the physiological decrease in the number of platelets during menstruation may be a predis-

posing factor in the development of purpura in females when associated with other causative factors that decrease the platelet level.

Laboratory Findings

The essential laboratory findings in these cases are a prolonged bleeding time, a normal coagulation time, and a reduced platelet count. There is a paradox between the normal coagulation time and the prolonged bleeding time. This is due to the fact that only a few platelets are necessary to cause the blood to clot *in vitro* but the clot in the body is a defective one. Purpura can be easily separated from hemophilia by these simple tests as hemophilia has a normal platelet count, a normal bleeding time, and a prolonged coagulation time. In addition, every case of purpura should have a complete blood study with careful examination of the smear for immaturity of the leukocytes and platelet distribution. Direct platelet counts are notoriously inaccurate. They should always be checked by observing the distribution of the platelets in the blood smear. Another useful laboratory procedure that closely parallels the number of the platelets is a study of the character and retractility of the blood clot when placed in a test tube. Two or three cubic centimeters of blood are placed in a test tube, incubated at 37° C. and observed at hourly intervals. Under normal conditions, the coagulum begins to retract within a few minutes and is usually complete in one or two hours after it is formed. In thrombocytopenic purpura, the clot is soft and fails to contract properly. A simple procedure for testing capillary permeability is the Rumpel-Leede cuff test. A blood pressure cuff is placed around the arm and the pressure is elevated half way between the diastolic and systolic pressure. This pressure is maintained from five to ten minutes. Where there is increased capillary permeability, multiple small petechiae will appear on the arm below the cuff. A bone marrow aspiration should be a routine procedure.

Autopsy Findings

The findings at autopsy in a case of essential thrombocytopenic purpura apart from the hemorrhages is rather disappointing. The body may have the anemic appearance that follows profuse or prolonged hemorrhage. The degree of anemia may be very severe. In twelve of the thirty-six cases, death occurred from intracranial hemor-

rhage. This is one of the dreaded complications of acute purpura as it can cause death within a very short time. At times, the hemorrhages were so widespread that it was difficult to consider any part of the body as the principal site

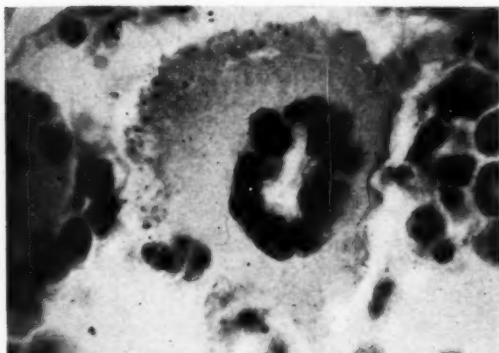


Fig. 1. Megakaryocyte in bone marrow in thrombocytopenic purpura. Poor results are to be expected following a splenectomy if these cells are absent or diminished in number.

of the bleeding. There were twelve such cases. Nine continued to bleed after splenectomies and are classified as postoperative deaths. In two cases bleeding from the gastro-intestinal tract predominated and in one case the principal bleeding was from the genito-urinary tract.

Apart from the hemorrhages and anemia, little else is found. The pathologist has naturally centered his attention on the spleen and in more recent years in addition to the bone marrow. The average weight of the spleen in twenty individuals over twenty years of age was 232 grams. The largest weighed 365 grams and the smallest, 103 grams. The normal spleen in an adult weighs approximately 150 grams. Hence the spleen in essential thrombocytopenic purpura is only slightly enlarged and rarely palpable. Histologically, the spleens showed only slight departure from normal. The Malpighian corpuscles were usually prominent. This is a normal finding in a young individual. The sinuses of the pulp frequently contained a few scattered neutrophils and eosinophiles in addition to collections of red blood cells. Megakaryocytes were occasionally found. It is extremely difficult to study phagocytosis on the routine hematoxylin and eosin tissue sections. The study of smears from the splenic vein at time of operation or imprints from the spleen

before fixation would be a distinct aid in this direction.

Bone marrow material was available for study in only eight of the thirty-six cases. Five of these showed a marked increase in the number of megakaryocytes. Every high power field contained several adult megakaryocytes. Many immature forms of megakaryocytes were present. Apart from changes in the number of megakaryocytes, the myeloid and erythroid elements showed nothing besides a mild compensatory hyperplasia as a result of the loss of blood and the multiple hemorrhages. The remaining three cases were bone marrows from cases dying of persistent purpura following splenectomies. All three of these bone marrows showed a marked decrease in the normal number of megakaryocytes. We are beginning to realize that the best results following splenectomy are in those cases where the megakaryocytes are abundant (Fig. 1). Likewise poor results are to be expected from a splenectomy in a case where megakaryocytes are absent or markedly decreased in number. This is very logical as the platelet count cannot be expected to show a marked improvement following splenectomy if the mother cells are absent in the bone marrow.

Pathogenesis

There are still many things that we do not know about the pathogenesis of thrombocytopenic purpura. Any theory to be acceptable must take into consideration that we have increased capillary permeability, a reduction in the number of platelets, a spleen that is apparently histologically normal, and a bone marrow that usually contains many megakaryocytes. It is extremely difficult to correlate all these facts in any one theory in the light of our present knowledge.

First consider the relationship between the number of platelets and the spleen. Kaznelson's idea was that the platelets were destroyed by the spleen and the removal of the spleen would restore the platelet count to normal. Rosenthal¹⁵ reports conflicting results from smears made from the spleen immediately after removal as some have reported a scarcity of platelets while others report large numbers of platelets. Rosenthal interprets this as evidence of various mechanisms involved. Morrison and Lederer¹² blame the failure of splenectomies to cure certain cases of thrombocytopenic purpura on the presence of

accessory spleens. After they began to look for them, they found them in as high as 35 per cent of their autopsies. One individual of this series who did not improve following a splenectomy had an accessory spleen that weighed 12 grams. DeSancitis and Allen⁴ think that the entire reticulo-endothelial system can assume a role in destroying platelets. They attribute the failure following certain splenectomies as due to other parts of the reticulo-endothelial system assuming the function of the spleen. Another line of thought is that the spleen exerts a specific platelet depressing factor that prevents the bone marrow from releasing the platelets. Troland and Lee¹⁷, in 1938, reported that they had prepared from spleens in cases of thrombocytopenic purpura an extract that when injected into rabbits caused marked reduction of the platelets and a great increase in the bleeding time. Extracts from control spleens failed to produce these results. Others have failed to confirm Troland's and Lee's results. Watson¹⁸ points out that other substances when injected intravenously will lower the platelet count. Limarzi and Schleicher⁹ because of the great number of megakaryocytes usually found in the bone marrow in thrombocytopenic purpura conclude that the lack of platelets in the peripheral blood is the result of a splenic depressing factor that interferes with the proper maturation of the megakaryocytes in the bone marrow. In considering any theory concerning the relationship of the bone marrow and spleen, we have to keep in mind that normally the spleen exerts a physiological inhibitory action upon the release of myeloid cells in the peripheral blood as shown by the leukocytosis and increased platelet count that follows the removal of the spleen in a normal individual.

The other factor that has to be considered in the pathogenesis of this disease is the relationship between the platelet count and the increased capillary permeability that exists in this condition. The platelets may fall to a relatively low level without the production of purpura. In pernicious anemia and aplastic anemia, we may have a relatively low platelet level without the appearance of purpura. Furthermore, the degree of bleeding in any case of thrombocytopenic purpura is not always directly related to the degree of thrombocytopenia. Bedson^{2,3} by means of a blood platelet antiserum in animals was able to reduce the platelet level to 40,000 without producing any signs of pur-

pura. However, if he first injured the capillaries of these animals by using an anti-red cell serum, then subsequently reduced the platelet level with the antiplatelet serum, purpura resulted. This led Bedson to conclude that we had two independent factors; namely, a vascular defect and platelet reduction. Mackay¹¹ and Macfarlane¹⁰ would almost dismiss the platelets as being secondary or a coincidental phenomenon and stress the inability of the capillaries to contract after injury as the primary defect in purpura. Macfarlane studied capillaries directly and observed that capillaries contract after injury but that in the hemorrhagic states associated with a prolonged bleeding time this contraction is absent. The platelet loss can be explained on a simple depletion in their efforts to close up the multiple capillary defects. Quick¹⁴ believes that a continual overproduction of histamine is responsible for the capillary vasodilation and increased capillary permeability. The platelets remove the histamine and are depleted.

Conclusion

The diagnosis of essential thrombocytopenic purpura is only made after a thorough history, physical, and hematological examination including a bone marrow study. In a series of thirty-six autopsies in this condition, the average age was 30.5 years and females predominated twenty-four to twelve. Apart from hemorrhages and anemia little is found at autopsy. The spleen is only slightly enlarged and rarely palpable. The average weight of the spleen in twenty cases above twenty years of age was 232 grams. Histologically we find little departure from normal. The bone marrow in the majority of cases shows large numbers of megakaryocytes. The presence or absence of megakaryocytes in the bone marrow is very important from the standpoint of prognosis following a splenectomy. We are still ignorant as regards the exact relationship of the spleen and platelets in this condition and also as regards the relationship between the capillary permeability and platelet level. We know that we can have pure capillary purpuras without any platelet reduction and that any purpura associated with a thrombocytopenia is a more severe one. The platelets act as a protecting factor and control over the severity of the purpura. The question naturally arises as to whether we are dealing with a definite disease entity in essential

purpura or only a syndrome due to a wide variety of still unrecognized etiological factors related to hypersensitiveness to various chemicals, hormones, foods, et cetera.

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THE PSYCHOSOMATIC APPROACH TO CERTAIN DERMATOSES

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The Theory

IN his "History of Medicine" Garrison³ states that the fundamental error of medieval medical science was in the divorce of medicine from surgery. He might have added that the fundamental error of modern medical science has been in the divorce of both medicine and surgery from psychiatry. The desire for a more adequate understanding of human ailments has lead investigators during the past few years to attempt to solve these problems with a somewhat new approach. That many physical illnesses have had an important psychogenic causal component has been recognized by students of medicine for many years. The lack of progress in further investigation was in a large part due to the dogma of nonscientific thinking that popularized the dualistic philosophy which has up to recent years impeded man's understanding of himself and his ailments. The newer approach does not allow for the consideration of a human being as being divided into organic and functional entities but rather that he should be considered as a complete unit reacting to his environment whether in a satisfactory or in an inadequate manner. The use of this method of

studying the individual and her complaints was used in the case to be presented.

I should like to point out briefly some of the most important factors in studying a case from this point of view.

1. The most essential is the establishment of a satisfactory emotional relationship between the patient and the doctor. Around this relationship revolves the entire understanding and success of the treatment of the patient. By its use, the physician can direct the patient's thoughts and emotional energies toward a more satisfactory method of adjustment. The establishment of this desirable emotional rapport can be enhanced by the referring physician who prepares the patient for the type of treatment which the psychiatrist may be able to give and the patient may expect to receive. An explanation by the referring doctor of his belief that the patient has no physical basis for her trouble along with a further explanation that emotional factors may be responsible for the patient's symptoms usually aids in the success of the patient's acceptance of psychiatric help. An added note that response to this type of treatment cannot be expected as readily as in many other forms of medical ther-

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apy will help her to not become impatient about the rate of her progress.

2. The patient must be indirectly led by the psychiatrist to consider herself as an individual and not as a symptom. In other words she must be taught that she and all her general reactions are much more important to her than any one or two isolated symptoms to which she has attached so much significance. As an example the patient's present complaint and focus of attention may be a generalized itching with resulting scratching. Yet with training and experience the doctor can direct her interest away from the itching and onto the all-important interpersonal relationships and experiences of her past and present life.

3. Through this direction she will be able to establish insight into her own inadequate behavior and with psychiatric help be able to redirect her energies in a more desirable manner.

The Method

The case is that of a woman whose symptoms bothered mostly herself but indirectly those with whom she was closely associated. This case is used to show how and why the individual has her symptoms as well as the manner in which they may be corrected. The general technique follows that which has been described by Dr. Felix Deutsch¹ in his "Associated Anamnesis." By this technique the psychiatrist attempts to introduce into the interview between the patient and himself the least possible outside material or thought. Further he attempts to direct the patient's stream of thought and conversation along lines most likely to be important in her gaining insight into the development of her inadequate present manner of adjustment, in this case primarily the itching with the resulting scratching and skin manifestations. The specific technique follows that as taught by Dr. John C. Whitehorn.² It attempts to study the individual's personality by evaluating the patient's inter-personal relationships as experienced during her lifetime.

The Case

The diagnosis of dermatitis artefacta of the case to be presented was made by Dr. Francis Lynch of Saint Paul. The patient was a married woman, forty-nine years of age, whose occupation was that of a housewife along with that of aiding her husband in his busi-

ness of retail furniture sales and funeral arrangements. She was Catholic and had completed two years at a local teachers college.

The first interview was in August, 1943, at which time she complained of intermittent generalized severe itching that necessitated an intense scratching of different parts of her body. Associated with this, especially at night, was a marked desire to urinate. These symptoms had been present for the previous four years and had led her to seek aid from local doctors as well as from the two large Minnesota medical centers. She had had many types of treatment including hormonal injections, calcium, varied sedatives and local topical applications to her skin in an effort to alleviate her symptoms. She told of feelings of depression which were always increased during spells when her itching was intense. Further, her usual interest in life had disappeared and at times she had been quite lethargic.

As presented and at this stage of progress, the seemingly important points are those given by the patient in the "present complaint" and it is at this stage where the doctor frequently makes his mistake. If nothing but the symptoms are discussed or treated very little is accomplished. If, on the other hand, an effort is made to find out why and to what the patient is reacting in this undesirable manner the chance for success in treatment is greatly increased.

During the first interview she readily displayed her skin manifestations which consisted of a general thickening and paleness along with several areas where the superficial skin had been excoriated due to intense scratching. She spoke quietly but showed underlying anxiety in her tenseness and in her desire to tell everything possible about herself. She was moderately depressed and as she explained felt these feelings of depression were a result of her present symptoms.

Over a period of several months and in several interviews, the following material was brought forth. She was the youngest of six children, being seven years younger than her next oldest sibling, a brother. Since her childhood she had always felt that her parents had considered her an unwelcome mistake as they had had no desire for further children at the rather late period in their productive life. Yet her parents had given her everything possible in a material way. Even as a child she had learned to be demanding and she had been able to dictate to her environment as she desired. On one occasion while studying religion with a group of children of her own age the priest unknowingly embarrassed her before the others. She immediately rejected further religious training and interest and from then on refused to return to church. Her parents did not force her to do so. Through her entire life she had been ambitious, determined, and well able to cope with almost any situation that it was necessary for her to face.

As a child, she felt very much alone saying, "I always seemed to be with older people." As a girl of twenty, her main job seemed to be "to fit in where my chief problem in life seemed to be taking care of older people." In school she did well in those subjects

in which she was interested. In adult life she became very interested in social activities, going to great effort to make any activity with which she was associated a success.

She characterized her father as being submissive and quiet and easily handled by her mother except when drinking, at which time he became quite a problem. As a result she never used alcoholic beverages because she had taken "the pledge" as a child at her mother's request. Her mother was the dominant factor in the household, frequently assuming the martyr attitude and always having trouble getting along with the patient's oldest sister. During recent years her mother had become a problem in that she continued to be one of the "older people" with whom the patient always had to live as a growing child and accept as an adult. One brother was a heavy drinker and had died of tuberculosis. She felt nothing but pity and disgust for him for being such a weakling.

Her husband was a rather quiet, easy-going man who did not seem to vary greatly in his mood reactions. By trade he was a mortician and it was with this work that she helped him, particularly in the care of the hair and face of the cadavers. One thing to which she did object was the interviewing of mourners. This seemed similar to her putting up with the general complaints of her elderly relatives.

Sexually, she had had her troubles. As a child she learned little in this line from her parents as that sort of conversation was tabu. At the age of five she was told by two nieces that she had been born of her mother. This was quite revolting to her and it was not until she was about twelve that she read a doctor book and was able to accept this fact. When she became pregnant, her father reprimanded her for her laxity in talking of her being pregnant. Her first menstrual period was not a total surprise as other girls had spoken to her of this phenomenon.

As a married woman, she had enjoyed sexual relations, not immediately, but after a year or two of married life. With her recent symptoms she had noted that she had a marked craving for her husband to run a stiff brush down the middle of her back while she lay prone on the bed. The sensation resulting from this stimulation was very similar to the orgasm of sexual intercourse.

Her only child was born during a period of economic stress, late in 1929. She and her husband had not anticipated his arrival which added to their problems. She was "invalided" for one year following his birth. As a nursing baby, he suffered from "mucous colitis." He had to be kept on a diet and it was not until he was ten years of age that his gastro-intestinal symptoms subsided.

As the boy grew she found increasing difficulty in controlling his activities according to her wishes. The boy tended to rebel and conflict was frequently expressed.

During the period of psychiatric treatment the patient talked to her husband regarding the interviews and it was at this time that he was first able to say that she was not courteous to their son and never had

been so. The son expressed similar feelings when he said to his mother, "You didn't want a son. You wanted an angel or a servant." Her frustration continued as the boy became interested in reading and other solitary activities while his mother wanted him to join in with the interests of the other boys of his own age, such as football, basketball, et cetera. The more she prodded him the more he rebelled.

The onset of the present illness is closely associated with the patient's attempt to dictate to her son. When he was ten years of age, and in about August of 1939, she was told by an eye specialist that her son would become progressively blind. Further, she believed that the less he used his eyes, especially to read, the longer his vision would last. She implored her son to reduce his reading to a minimum but as usual he rebelled. In October, 1939, she became aware that her efforts were in vain and it was at that time that she began suffering from her itching which gradually became more intense. This itching along with feelings of depression persisted during the intervening four years.

During the interviews, interpretations of various thoughts, feelings and behavior were made. The patient gradually gained insight into her reactions. To aid in her readjustment many situations and problems were discussed. As a result she decided to leave as much as possible of the disciplining of their son to her husband. It was pointed out that the less she directly demanded of the boy the more he would be willing to co-operate. This turned out to be true. Further, resocialization was encouraged, such as church, club and other group activities.

Because of the distance which the patient had to travel and of her limited financial resources she was interviewed at rather lengthy intervals for a seven-month period. Her response was gradual and encouraging. It might well be pointed out here that to have attempted to reduce the patient's anxiety by unfounded optimism during her treatment would have been to invite disaster.

In a letter which I received six months after the last interview the patient stated that her skin trouble had disappeared but more important she, her son and her husband had spent the most happy six months of their family life. Her son had become more interested in outside activities and hence used his eyes to read less. To the amazement of the patient and without any suggestion from her, he had become interested in football and basketball. She was now enjoying group activities in her town and her husband was more at ease about the congeniality of the family in general.

She had learned that her ability to adjust herself to her everyday problems was much more important than her skin condition and that the latter had cleared up as she became better able to make more adequate inter-personal adjustments.

Psychiatric Formulation of the Case

In formulating this case, then, we see a woman who because of her early rejection by her parents learned to react to her environment in an

aggressive manner. Her parents were emotionally immature and from them she learned similar inadequate methods of handling her problems. As long as her aggressiveness met with success she remained fairly well adjusted, but when her aggressiveness failed to gain satisfaction she reacted in a more inadequate manner as expressed in her symptoms of severe itching necessitating the personal discomfort of resulting skin lesions along with the undesirable feelings of depression.

Summary

In conclusion, the case was presented with the hope of showing the error in thinking of human ailments as being either functional or organic.

An attempt was made to understand the human being who was reacting in an undesirable manner, one of the essential features being her skin condition. With this understanding and aid in redirecting her emotional drives the patient made a more satisfactory type of adjustment to her environment. Her symptoms disappeared, not by treating the symptom itself as formerly had been attempted, but by treating the individual as a whole.

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ADMINISTRATION OF PENICILLIN BY THE KNEE JOINT METHOD

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ARTICLES by Rummelkamp and associates and their findings relative to the rapidity with which penicillin appeared in the various tissues and body cavities and the period of time during which these tissues and cavities supplied the administered penicillin to the blood and body as a whole and was eliminated by the kidneys, caused the writer to institute a practice of administration of penicillin which up to the present time has been very satisfactory from the standpoint of the patient, as to discomfort and inconvenience, and the results obtained. I have seen no reference advocating knee joint administration of penicillin for conditions outside the knee joint.

We chose the knee joint because of its size, accessibility and the expectation of delayed dialysis through a synovial membrane giving prolonged administration of this drug which is excreted so rapidly by all usual methods of administration.

We used the knee joint first in a case of multiple arthritis. Of the number of affected joints one knee was not involved and 100,000 units were injected into it as a preventative measure. No discomfort resulted so that we would aspirate and inject the affected knee one day and inject the well one the next, using 100,000 units in 10 c.c. of sterile water as the regular dosage.

The smaller volume of 10 c.c. did not give the distention pain.

We have used this method at this writing over eighty times, in a few instances using both knees, one in the morning, the other at night, for several days and 80 per cent of the doses have been 100,000 units in 10 c.c. of sterile water.

Some patients have had a little discomfort for five or ten minutes immediately following injection. With the use of 2 c.c. of 1 per cent novocaine in the joint several minutes preceding the penicillin injection patients have no discomfort.

Our patients have varied in age from fifteen to seventy-nine years.

The following types of cases have been treated: arthritis, pneumonia, gangrenous gall bladder and postoperative infected abdominal wall, strangulated hernia with resection of gut and gas gangrene, septic sore throat and beginning arthritis in one knee, gonorrhea.

All these patients made splendid recoveries, except those with arthritis, who improved.

We have treated, experimentally, two patients with syphilis. One has received twenty-six and the other nineteen knee joint injections of 100,000 units each in 10 c.c. of sterile water. They come to the office, get their injections and walk out.

One of these patients who also has tabes has had three spinal injections, two of 100,000 units

each and one of 150,000 units besides his twenty-six knee injections. The drugs were dissolved in 10 c.c. of sterile water but well mixed with the spinal fluid before injection. No discomfort followed. The second, who received nineteen knee joint injections, had varicose ulcers of the sluggish gray necrotic luetic tissue type which granulated in under this treatment. He also was given 100,000 units of penicillin in 10 c.c. of water in the spinal canal when we aspirated for a State test. Spinal fluid was negative in this case. Both of these patients were old neglected cases and "didn't know they had it." The final results may be interesting.

The method we use is to dissolve the penicillin in 10 c.c. of sterile water, using a No. 16 needle to perforate the stopper and aspirate the solution. With a 23 caliber 1.5 inch needle we inject 2 c.c. of novocaine into the knee joint hugging the patella near the tendon insertion. After massaging of the knee contents for several minutes with the needle in place, the 10 c.c. of penicillin is injected through this needle and an ice bag is placed on the knee for the next eight or ten hours. The sodium preparation made by four different companies was used. The lighter colored brands seem a trifle less irritating.

Using larger doses in small amounts of sterile water in the knee joint seems desirable because a greater blood concentration over a longer period of time is obtained and the volume being small does not cause discomfort from distention. The solution of 10,000 units per 1

c.c. of sterile water seems to be relatively non-irritating to synovial membrane.

One may hesitate to use this method, arguing, the danger of joint infection, damage, etc., but the gravity of the case might justify taking such a risk which is very minimal if surgical precautions are used. I must judge from my own experience. I expect allergic individuals will be found, but the lack of toxicity otherwise (no liver, heart or kidney damage in contrast to the sulfa group), warrants its use first rather than last. The knee joint seems to be a desirable route for administration, causes no more discomfort than giving a hypodermic and produces a more prolonged action than an intramuscular injection.

I wish to acknowledge laboratory help and advice from Miss Mary Pollock, technician, and Dr. Arthur H. Wells of St. Luke's Hospital in coming to the conclusions outlined above.

* * *

Since writing this article, we have had apportioned to one of our hospitals some deep orange-colored, 100,000 Unit Penicillin of considerable bulk. This penicillin given intramuscularly is painful and in the knee joint very painful and causes marked swelling. This reaction is very evidently due to foreign matter in the preparation and should call for better controlled laboratory methods in its manufacture. Its presence also may harm parenchymatous organs which have been immune to injury from the purer penicillin which is nearly white. The light lemon-colored Penicillin has given very little discomfort and it would seem the lack of irritation is an index of purity.

DISEASE IN CHINA

In China disease is much more prevalent than it is here. Cholera is reported every year; there were 100,000 cases in 1932, 65,000 cases in 1942, 17,000 cases in 1943. Bubonic plague had approximately 6,000 cases in 1942. It is estimated that there are about 6,000,000 cases of dysentery annually, 90 per cent bacillary, 10 per cent amebic. The estimated number of cases per annum of typhoid fever is 700,000; of smallpox, 500,000;

of diphtheria, 360,000; of scarlet fever, 180,000. Epidemic meningitis is estimated at 100,000 cases per annum; malaria, 21,000,000 cases per annum; schistosomiasis, 10,000,000 cases per annum. Active tuberculosis is estimated at 36,000,000 cases, 8 per cent of the population. Under-nutrition is so widespread that no figures of any kind are available.—RAYMOND B. FOSDICK, LL.D., *Am. J. Pub. Health*, (Nov.) 1944.

PEDIATRIC-PATHOLOGICAL CONFERENCE

DULUTH PEDIATRIC SOCIETY

O. W. Rowe, President

ST. LUKE'S HOSPITAL

Arthur H. Wells, Pathologist

Case Presentation

DR. A. H. WELLS: A seven-month-old infant was presented before this group two months ago with a huge palpable mass in the right side of the abdomen. After the clinical history and individual physical examinations of the child the nine pediatricians present agreed on a diagnosis of a neoplastic process in the abdomen. Among the lesions mentioned for differential diagnoses were: Wilms' tumor, neurocytoma, fibroma or fibrosarcoma, carcinoma, lipoma, leiomyoma and enterogenous cyst. Three of the pediatricians voted for immediate laparotomy and six were in favor of continuing palliative treatment with x-rays. Dr. Sincok, would you mind briefly reviewing the history for us.

DR. H. A. SINCOCK: This infant was five weeks premature from the expectant date at the time of his normal delivery. He weighed 7 pounds 14 ounces and is said to have been a healthy, well developed baby. He was breast fed for three months during which time he apparently had no trouble whatever. However, when attempts were made to feed the infant foods other than milk he suffered from loose stools and intermittent vomiting. No food could be found other than milk which agreed with him. He was brought to me at six and one-half months of age. Physical examination revealed a rather emaciated baby for his age. The cranium was normally shaped and the fontanelles flat. No abnormalities could be found in the head, chest or throat. There was however, a very distended abdomen in which one could palpate a large, firm, tumor mass which extended from under the costal margin on the right side down to the anus. In fact a finger could not be put into the anus because of the blocking mass immediately inside of the anal sphincter. At that time an x-ray examination revealed the large tumor mass in the right side of the abdomen and the roentgenologist suspected Wilms' tumor of the right kidney. A few days later intravenous diotrast and roentgenograms of the kidneys revealed an inconclusive filling in the right pelvis and ureter. There was some suggestion of evidence that the right kidney may have been normal with some superimposed mass in the kidney region.

The clinical diagnosis at that time was neuroblastoma or Wilms' tumor. X-ray therapy resulted in an appreciable decrease in size of the tumor and the mass which continued to distend the entire right side of the abdomen, felt somewhat softer than previously. Two months before the child's death he was demonstrated before this group of eminent pediatricians of the Northwest and there was almost unanimous agreement on the diagnosis

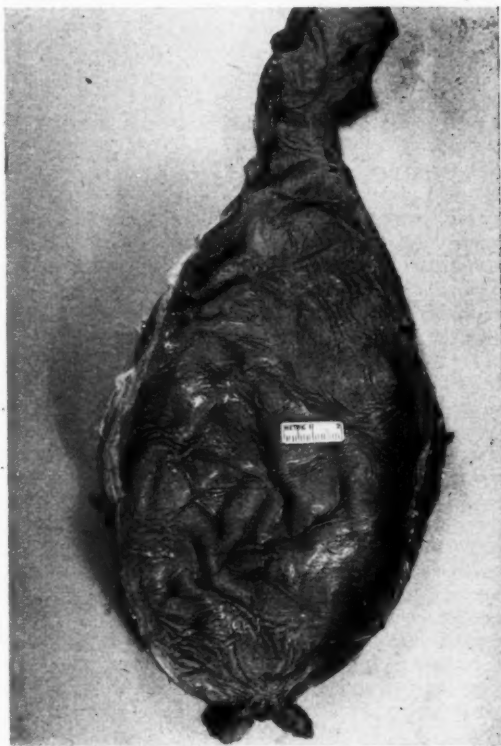


Fig. 1. Congenital anal stenosis.

of a malignant tumor in the abdomen. In fact, as already stated six of the nine pediatricians felt that palliative x-ray therapy was indicated.

I advised the mother to take the child to a pediatric surgeon out of town, however, she took him to a Christian Scientist practitioner, and I did not see him again until he died, two months later. A clear cut history of his terminal progress was not obtainable. It appears that he had been suffering from obstipation and vomiting shortly before death.

DR. A. H. WELLS: The subject is now open for questions or diagnoses.

DR. R. E. NUTTING: Was there a barium enema study?

DR. H. A. SINCOCK: No.

PHYSICIANS: "Neurocytoma," "Wilms' tumor," "Malignancy in the intestines causing obstruction."

Autopsy

DR. A. H. WELLS: Briefly, the only significant necropsy findings were those of stenosis of the anus, emaciation and obvious intestinal obstruction due to the stenosis and a fecal impaction. There was a huge dilatation of the rectum, sigmoid and descending colon with a massive hard fecalith filling these structures. A pencil could be forced through the anus with some difficulty. The anus, sigmoid and descending colon formed one huge cavity (Fig. 1) measuring approximately 25 cm. long and 12 cm. in diameter. It was located primarily on the right side of the abdomen. There was a rather sudden cessation of the extreme dilatation at the upper end of the descending colon. The proximal portion of the colon was only mildly dilated up to 2 cm. in diameter. The walls of the remarkably dilated portion averaged 4 mm. in breadth and were unusually firm. Microscopic sections of these walls revealed a hypertrophy primarily of the circular muscularis. However, all structures were enlarged including the glands of Lieberkühn. Auerbach's and Meissner's plexuses were not unusual. There was no inflammatory change in the gut wall. The dried, hard, fecal matter filling the sac was laminated in some areas. It formed a cast of the pelvis and much of the lower abdomen and extended up under the costal margin on the right side. The remainder of the large and small intestines as well as the stomach were moderately distended with gas. There was very little food or fecal matter in them. The peritoneal surfaces had no injection or adhesions. There was only mild congestion of the lungs and no consolidation or purulent matter. The myocardium, liver, spleen and kidneys revealed mild toxic changes. It was concluded that the infant had died of intestinal obstruction as the result of congenital anal stenosis and a complicating huge fecal impaction.

Discussion

DR. F. R. PETERSON: How does this condition vary from megacolon?

DR. A. H. WELLS: According to Wilensky⁴ the "mega" syndromes are generally conceded to be the result of disorders in the autonomic nervous system. There is no organic obstruction. The end result may look much the same, with dilatation of the colon and hypertrophy of its walls. Included in the "mega" syndromes are megaesophagus, with cardiospasm, megastomach, magacolon, megalo-ureter, megalo-pelvis of the kidney, chronic dilatation of the urinary bladder and possibly certain cases of hydrocephalus. While conditions similar to stenosis of the anus would include esophageal stricture, pyloric stenosis, stricture of the colon, incomplete obstructions of the ureter, obstructing prostatic hypertrophy and congenital stenosis of the aqueduct of Sylvius with dilatation of the lateral ventricles. In all of these situations there is a necessarily prolonged balance between the degree of stenosis and the func-

tion of the proximal structures to result in severe grades of dilatations.

Ladd and Gross¹ made one of the more widely accepted classifications of types of anal and rectal congenital obstructive abnormalities. Their four types are of sufficient importance to list them here:

Type 1.—Incomplete rupture of anal membrane or stenosis at a point 1 to 4 cm. above the anus.

Type 2.—Imperforate anus. Obstruction due only to persistent membrane.

Type 3.—Imperforate anus, but with rectal pouch separated from anal membrane. Rectal pouch ended blindly either in pelvis or above pelvis.

Type 4.—Anus and pouch normal. Rectal pouch ended blindly. Either membranous obstruction, or separation of these two pouches. When pouches were separated, a cord of tissue (without a lumen) occasionally connected them.

In their collection of 162 cases collected during a twenty-five-year period from 121,515 patients entering the Boston Children's Hospital they found Type 3 to be twice as frequent as all of the other types combined. Any one of these four types (approximately 50 per cent of all cases) of anal or rectal abnormalities may be associated with fistulae. These may extend from the rectum to the urinary bladder, urethra, ureter, uterus, vagina or perineum.

The symptoms and signs² resulting from complete or practically complete obstruction by any one of the four types were those of absence of bowel movements, inability of parent or physician to find an anal opening, and after the first twenty-four to thirty-six hours of life, abdominal distension, vomiting and refusal to eat. In Type 1, where the stenosis was not too severe or in cases where the complicating fistulae were large enough for meconium and bowel movements to relieve the obstructing symptoms, the condition may not be diagnosed or suspected for as much as a year or more. In most instances a local examination will suffice for recognition of the various types of obstruction including the possible fistulae. Occasionally the latter may be quite small and patent only at intervals so that their detection may be accomplished only with difficulty. Wangenstein and Rice³ devised a practical method of delineating the position of the blind end of the rectum by holding the infant with head down so that rectum will fill with gas. A flat x-ray plate of the abdomen and pelvis is then taken. After the first twenty-four hours of life this method is reliable. Injections of opaque material may be of added aid in a complete study of a given case.

Simple stenoses of the Type 1, can be cured by daily dilatation of the anus in the hospital and later the dilatation may be carried on at specified intervals by the parent for the ensuing four to six months. The other three types of rectal and anal obstructions require well-established surgical procedures which are generally successful if performed within the first three or four days

(Continued on Page 234)

CLINICAL-PATHOLOGICAL CONFERENCE

MINNEAPOLIS GENERAL HOSPITAL

A. J. HERTZOG, M.D., Pathologist

MESOTHELIOMA OF THE PLEURA

Report of Case

DR. JAMES RILEY: This is the case of a sixty-year-old white male who entered the Minneapolis General Hospital in May, 1944, with the chief complaint of shortness of breath and pain in his left chest. He had been perfectly well until February, 1943, when he noticed the onset of shortness of breath and a feeling of compression in his left chest. He consulted a physician who diagnosed it as pneumonia and hospitalized him in a private hospital where he remained for one week. Ten days later his symptoms returned, and he was again admitted to the private hospital for a thoracentesis. Two thousand cubic centimeters of fluid was removed from the left pleural cavity. Between March and August, 1943, he was hospitalized eight times. On each occasion between 1,000 and 2,000 cubic centimeters of fluid was aspirated from his left chest. In August, 1943, he was sent to the Glen Lake Sanatorium with a tentative diagnosis of pulmonary tuberculosis. At Glen Lake the diagnosis of tuberculosis could not be established. He remained afebrile. The fluid continued to be aspirated from his chest. Bacteriological studies, including guinea pig inoculations from the fluid, were all negative. He was bronchoscoped, with negative results. The pain in his chest would be made worse by the thoracentesis and would subside between aspirations. He had no cough or hemoptysis. On entrance to Minneapolis General Hospital in May, 1944, physical examination showed a fairly well preserved white male whose weight was 140 pounds. His blood pressure was 166/110, his pulse 80 and his temperature 99 degrees. Examination of the head and neck was negative. There was retraction of the whole left side of the chest. There was dullness and flatness over the entire left chest below the fourth rib. Breath sounds were decreased over this area. There were no râles. Examination of the right side of his chest was essentially normal except for hyperresonance. The mediastinum appeared shifted to the right, as the heart border was 6.5 cm. to the right of the midline and only 3 cm. to the left. The abdomen was negative. There was no edema. Rectal and neurological examinations were negative. Hemoglobin was 82 per cent (Sahli), white blood count 7,600 with a normal differential count. Urinalysis was negative except for a trace of albumin. Sedimentation rate was 40 mm. (Westergren) for one hour. Plasma proteins were 6.5 grams per 100 c.c. with a normal albumin-globulin ratio. During his hospital stay, he had a thoracentesis twice a week. Each time from 300 to 600 c.c. of fluid was obtained. Sometimes the fluid was bloody. The thoracenteses proved to be painful and he always complained of a great deal of pain following them. The specific

gravity of the fluid varied from 1.012 to 1.013. The fluid showed from 0 to 3,900 red cells per cubic millimeter. On three occasions search for cancer cells was made in the fluid, with negative results. In May, 1944, he complained of pain in his epigastrium after meals. A gastro-intestinal x-ray study revealed a duodenal ulcer. He was placed on an ulcer regimen and his symptoms rapidly subsided. On September 9 a pericardial friction rub was noted and he developed edema of his ankles. He was digitalized but symptoms of heart failure persisted. A venous pressure was 30 mm. of water. The liver became palpable, the chest pain and dyspnea increased. Because the hemoglobin fell to 55 per cent (Sahli), he was given a blood transfusion. However, he became rapidly worse and expired on October 6, 1944. His entire illness lasted approximately 18 months. During his entire stay at Minneapolis General Hospital, except for the last two or three weeks, he was ambulatory and walked around the ward.

DR. HERTZOG: The problem we have is the nature of the lesion in his left chest that was responsible for the continual production of fluid in his left pleural cavity. The pericarditis and heart failure appeared to be a terminal event. We will see if Dr. Stenstrom can throw any light upon the subject.

DR. STENSTROM: Chest films show the heart displaced to the right by fluid in the left pleural cavity. The fluid obscures the diaphragm completely and makes a very dense shadow. The left lung appears collapsed, while the right lung appears normal. These later films show, in addition to the fluid level, a peculiar shadow evidently continuous with the pleura. The pleura is so thickened that the question of a tumor arises. Other films show, in addition to the thickening of the pleura, two fluid levels. I don't think one can be certain whether the thickened pleura represents an inflammatory process or a neoplastic one. However, the peculiar bulging of the posterior pleura suggests a neoplasm. This film of his stomach shows the characteristic deformity of the duodenal cap seen in a duodenal ulcer. In addition, there is an accessory pocket caused by the ulcer penetrating the muscular coat and serosa of the duodenum.

DR. HERTZOG: When you speak of tumors of the pleura, do you mean metastatic ones?

DR. STENSTROM: No, I have in mind a primary neoplasm of the pleura, such as an endothelioma or mesothelioma of the pleura.

CLINICAL-PATHOLOGICAL CONFERENCE

DR. DENNIS: I am going to guess in favor of a primary malignancy of the pleura.

DR. HERTZOG: One has to remember that primary carcinomas of the lung can metastasize to the pleura and give a picture very similar to a mesothelioma of the pleura.

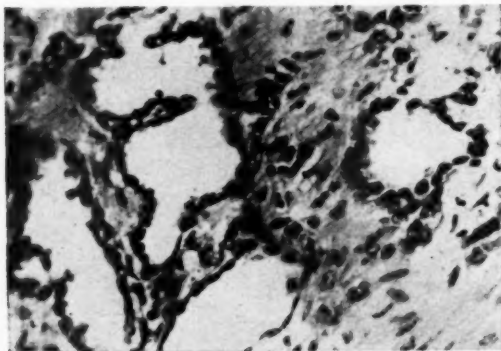


Fig. 1. Mesothelioma of pleura. Note cystic spaces lined by cuboidal cells.

DR. DENNIS: Do you think that the persistent bloody pleura fluid has any significance?

DR. HERTZOG: Malignancy will give a bloody fluid more often than an inflammatory process.

DR. BRENNER: You cannot use the presence or absence of blood in a thoracic or abdominal fluid as a point of differentiation, as I have seen an inflammatory process give a bloody fluid.

DR. DENNIS: If one would assume that this is an inflammatory process, what type of micro-organism would one expect to find?

DR. HERTZOG: Tuberculosis is the commonest cause of unexplained pleural effusions.

DR. BRENNER: Tuberculosis as a cause of pleurisy is not as common today as it used to be. I think practically every case of rheumatic fever would show evidence of pleurisy if examined carefully.

DR. STENSTROM: Nevertheless, you should rule out tuberculosis.

DR. HERTZOG: Repeated guinea pig inoculations were negative for tuberculosis. Dr. Riley will give the autopsy findings.

Autopsy Findings

DR. RILEY: I will give only the essential findings. The right pleural cavity contained approximately 350 c.c. of straw-colored fluid, while the left contained 100 c.c. of similar fluid. The left parietal pleura was diffusely thickened, measuring 2 cm. in thickness. The left lung was completely collapsed and covered by thick, greyish-white fibrous tissue. This involved also the pericardial sac. The pericardial sac was thick, greyish-white and indurated. The sac was obliterated by a fresh hemorrhagic, fibrinous exudate. The right pleura cavity and right lung appeared normal except for three small tumor nodules adjacent to the pleural surface of the right lung. A careful search of the bronchi failed to show

any evidence of any neoplasm. The peritoneal cavity contained about 700 c.c. of straw-colored fluid. The liver was enlarged. It showed passive congestion and contained several discrete tumor nodules which measured from one to three centimeters in size. There was the scar of a healed duodenal ulcer. The remaining ab-

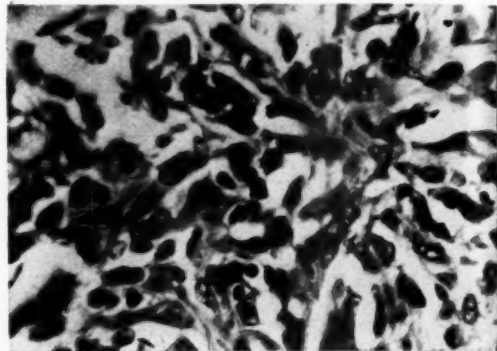


Fig. 2. Metastasis to liver. Note sarcomatous structure.

dominal viscera, including the genito-urinary tract, appeared normal.

DR. HERTZOG: At the time of autopsy, it was only when we found the tumor nodules in the liver that we could be certain that we were dealing with a neoplastic rather than an inflammatory process. I will show you the microscopic slides. You will notice from this section of the left pleura that one cannot immediately say what one is dealing with. It shows a great deal of collagenous fibrous tissue with collections of fat cells. Some areas contain small cystic spaces lined by discrete cuboidal cells that resemble epithelium (Fig. 1). Here is another area in which there are solid areas of similar cells that are beginning to have a sarcomatous appearance. We know now that this is not an inflammatory process. One is struck with the resemblance, histologically, to a synovial sarcoma or synovioma arising from the synovial membranes of large joints. These tumors likewise have epithelial-lined spaces that blend with a sarcomatous stroma. Note the pleomorphic appearance of the cells in this section of the parietal pericardium. The metastatic nodules in the right lung have the same picture as found in the left pleura. The right lung is completely atelectatic. The liver nodules have a distinct sarcomatous appearance (Fig. 2). The remaining liver shows severe passive congestion. The heart failure was on a mechanical basis due to the pericardial involvement.

Our diagnosis in this case is then a primary mesothelioma of the left pleura with involvement of the pericardium and metastasis to the right lung and liver. The diagnosis of primary mesothelioma of the pleura is based on a consideration of all the features in this case. One is naturally cautious about making such a diagnosis in view of the controversy in the literature. In favor of a primary pleura malignancy is the long clinical course with repeated left-sided pleural effusions

(Continued on Page 220)

HISTORY OF MEDICINE IN MINNESOTA

HISTORY OF MEDICINE IN GOODHUE COUNTY

(Continued from February issue)

About 1865 the drug stores began "putting on city style and delivering free of charge." In 1869 Charles Hill of Pine Island was elected to the state senate, and the Old Settlers Association was founded, with W. W. Sweney as permanent vice president. In 1869 the Goodhue County Medical Society was organized, as provided for by the constitution of the Minnesota State Medical Association, which had been reorganized and of which Drs. Sweney, Hawley and Hewitt were charter members.

The purpose of the Goodhue County Medical Society, as stated by those who called the first meeting, was "to secure by organization a more perfect harmony and sympathy among ourselves, to make the profession present a united front to the inroads of quackery and fraud, and also, to stimulate each member to more hearty and continual effort for professional elevation and success."⁴ The following were the first officers of the organization:

President—W. W. Sweney, Red Wing
Vice President—Charles Hill, Pine Island
Recording Secretary—Salem Town, Red Wing
Treasurer—A. H. Jones, Red Wing
Censors—C. N. Hewitt, Red Wing
E. S. Park, Red Wing
O. H. Hall, Zumbrota

Other regular physicians who were charter members were: A. B. Hawley and F. F. Hoyt of Red Wing. Drs. Hill, Park, and Jones were elected delegates to the State Medical Association, and Drs. Hawley, Hewitt, and Hill were appointed members of a standing committee on intelligence. A committee⁵ was appointed to draft a law legalizing state and county medical societies, to be presented, if accepted, to the State Medical Association, with a view to securing its enactment by the state legislature. The society also resolved to call the attention of the State Medical Association to the fact that there was no law providing compensation to physicians making postmortem examinations, in cases of legal investigation, or for giving testimony as medical experts in legal investigations where no postmortem is made. A uniform minimum fee table was also agreed upon at this meeting.

1870-1880

During the first years of its existence the medical society met semi-annually. In January, 1870, Christian Gronvold and Bruno Jaehnig were elected to membership. Both of these men stood high in their profession and held several public offices for long terms. Dr. Gronvold was one of the foremost authorities on leprosy. At this meeting, also, a petition was adopted asking Congress for legislation on the subject of the rank, pay, and authority of surgeons in the Navy. This petition

4. *Goodhue County Republican*, March 18, 1869.

5. Hewitt, Hoyt and Park.

asked justice for a body of men whose position was then a disgrace to the nation.

The second group of officers who served the society included William W. Sweney, president, E. S. Park, vice president, Bruno Jaehnig, permanent secretary, Christian Gronvold, assistant secretary, and A. H. Jones, treasurer.

Typhoid fever and scarlet fever occupied the stage in the seventies. In the summer of 1870, it was reported that O. H. Hall of Zumbrota had charge of two hundred cases of typhoid of which only two terminated fatally. It is apparent that this was either newspaper exaggeration or else that not all of the cases were diagnosed correctly. The disease was prevalent, nevertheless.

In 1871 eight leading regular physicians⁶ of Goodhue submitted, by request, to the State Medical Association a list of the number of cases of various diseases that each had treated during the year. The list is probably incomplete; but it serves as an indication of local health. The total number of typhoid cases may be estimated from the reports as forty-four. They were said to be milder and rarer than usual. Of scarlatina there were about one hundred and forty-five cases; of dysentery, fifty-three; erysipelas, ten; diphtheria, five; rheumatism, six; rubeola, ten; spinal meningitis, one. In 1877 and 1879 there were minor epidemics of typhoid in the neighborhood of Kenyon. Scarlet fever again appeared in Red Wing in a mild form in January of 1872, and again in Goodhue Center in January, 1878. A considerable number of fever cases, probably dysentery, were reported in the fall of 1873 and continued through the winter months that followed. Pine Island and Zumbrota seem to have been the centers. About a year later both towns experienced slight epidemics of measles and "Black Hills" fever.

More attention, however, was being given to the duties and authority of town and county officers. Red Wing had a city physician elected each year, whose duty it was to keep track of such contagious diseases as were within the city and to do what he could to prevent them from spreading. The newspapers printed, from time to time, extracts from medical books concerning the prevalent epidemics.

In 1872, Charles N. Hewitt was elected permanent secretary of the state board of health, a position which he held until 1897. During these years he was especially active in the work of preventive medicine, and in Goodhue County, as well as throughout the state, he helped organize local boards of health, lectured on ventilation and sanitation, and inspected public buildings, schools, and water supplies. He advocated especially the teaching of hygiene and first aid in the public schools in place of teaching physiology. He suggested that suitable textbooks be prepared and that newspapers be used for health information. As time progressed the amount and variety of work done by the state board of health increased enormously. For the first ten years of Dr. Hewitt's service his salary was \$500 a year. During the last year he served as secretary his salary was raised to \$3,500.

Dr. Hewitt acquired a national reputation for his work in public health. He was an honorary member of the New York State Medical Society, of health societies in both France and England, and was elected president of the American Public Health Association. Geneva College, New York, conferred upon him an honorary degree in recognition of his service. His biography is given more fully in the biographical notes.

During the seventies a total of about fifty physicians came to Goodhue County. Some stayed but a short time and very little is known of them, particularly if they practiced in small communities. Some of the more important physicians who came during this period were: E. C. Bolander, George Leininger, William M. Sweney, a son of the pioneer doctor, J. H. Sandberg, and G. C. Wellner, of Red

6. Drs. Hall, Hill, Tibbets, Sweney, Jaehnig, Hoyt, Park, and Hewitt. The statistics are from the records of the State Medical Association for that year.

HISTORY OF MEDICINE IN MINNESOTA

Wing; A. T. Conley, of Cannon Falls; A. K. Lindboe, and H. L. McKinstry, of Zumbrota; George H. Overholt, of Kenyon.

The first record of a woman physician in Goodhue county is the card of Mrs. C. A. Bennett, M.D., which appeared in a newspaper in 1876. According to this card she specialized in the diseases of women and children, gave free consultation from one to four o'clock every afternoon, and gave away free trial bottles of "Cough Cure and Renovator," a brand of her own making. A little later "Mrs. Dr. Goebel" came to Red Wing from Chicago where she claimed to have had an extensive practice. In Red Wing she was successful both as a physician and druggist, although she moved, after a few years, to Fargo, Dakota Territory, and later, to Moorhead, Minnesota.

1880-1890

During the eighties approximately thirty more physicians are recorded as practicing in Goodhue County. The physicians' directory for 1883-90 included a large number of names but omitted those who stayed only a year or so and then moved to other fields. The decline in the use of public advertisements which occurred about 1880 adds to the difficulty of compiling an accurate list of practitioners. A modern scholar may well agree with the editor of the *Advance* who wrote with some ire:

Every physician and professional man should have his card in the local paper of his city. There is nothing unprofessional or contrary to medical or any other kind of ethics in it. The newspapers should be a complete business directory each week to the professional man as well as to the mercantile interests of the city. The man who will not advertise in a paper that is devoted, on very small pay, to the building up of the manufacturing, business, educational, and social interests of the city ought to be considered out of business. If such a non-advertising course is generally pursued much longer, this city will soon be without papers.⁷

If physicians' notices were lacking, however, there was one unusual card, the first of its kind to be noted in Goodhue county. Mina L. Hauer announced that she had arrived in Red Wing with the intention of making it her permanent home, that she was a graduate of one of the best schools in the country, and that she would wait on ladies desiring the services of a midwife.

The more important physicians were J. V. Anderson, of Kenyon, H. E. Conley, of Cannon Falls, Glidden of Pine Island, Newhall and M. Magelssen, of Red Wing, and Hans J. E. Karen.

Dr. Eduard Boeckmann, while maintaining his practice in St. Paul, is said to have occupied offices in Red Wing, Zumbrota, and elsewhere for purposes of consultation. He often visited Dr. Gronvold also during those years. Both were interested in leprosy. Dr. Boeckmann had been in charge of a leper hospital in Norway before coming to this country, and Dr. Gronvold was the first physician to report a case of Norwegian Leprosy or Elephantiasis Graecorum in Minnesota.⁸ In 1879 Dr. Gronvold, always generous with his hospitality, had as a guest Dr. Gerhard Armauer Hanson, from Norway, who was then in charge of a leper hospital there and who was the discoverer of the leprosy bacillus.

Beginning in 1881 the Goodhue County Medical Society began to meet quarterly instead of semi-annually. The membership was increased, amendments were made to the constitution, and the organization seemed to take a new lease on life. Methods of popular education in regard to health were considered; the desirability

7. *The Advance of Red Wing*, March, 1883.

8. This case was reported in 1879 to the Goodhue County Medical Society. Subsequently it was included under the title "Remarks on Norwegian Leprosy" in the report of the Minnesota Board of Health for 1873, pp. 70-74. "Leprosy in Minnesota," first published in *Public Health* (1886-7 II 89-91) is another article by Doctor Gronvold.

of new legislation in regard to medical testimony was considered and the need of change in laws relating to malpractice suits was stressed.

In 1883 the organization of local boards of health and a county hospital were discussed. The latter question provoked considerable interest. An editor who compared the conditions in Wabasha and Goodhue Counties pointed out that the former, with a county hospital, expended only about \$500 for medicines and attendance the preceding year, while Goodhue for the same length of time spent \$4,605.21 for its poor, one-half of which was for medical attendance and medicines. The difference was explained by the fact that in Goodhue county the poor who required attention could call on any physician they desired, at the regular fee. Medicines bought in small quantities cost more than if bought in large quantities, and the poor had to be boarded separately instead of in groups. A hospital was also needed for such cases as railroad mishaps in which a number of people might be hurt, as well as for cases of contagious diseases. The hotels and boarding houses were poor places to take anyone needing attention, and private families generally did not like to take the risk or responsibility.

The county hospital was finally founded in the fall of 1884. The city physicians of Red Wing consented to take care of the hospital for one year free of charge. Dr. Bruno Jaehnig was the first superintendent. The rest of the staff consisted of C. N. Hewitt, Geo. Leininger, and Mr. F. Seebach, who represented the county commissioners. The hospital was pleasantly situated, overlooking the river, and the rooms were free of dirt and dust. The steward and nurses lived in the same building. Patients were admitted who would otherwise be sent to the poorhouse or who lived at a distance and could be attended there at less expense to the county. The physician in attendance was not responsible for any previous treatment nor for treatment given by a private physician. Others than those depending upon the county made use of the hospital. Thus it served those without homes and provided a place where nursing could be secured. The charge for paying patients was (a) \$5.00 per week in a ward with ordinary hospital fare and nursing, but no medical attention or medicines without extra charge, or (b) \$10.00 per week for a private room and special fare, with medicines and washing, other than bed linen, extra. Such patients were to be attended by their own physicians at their own expense. Paying patients might bring with them or employ nurses of their own to be boarded and lodged at \$5.00 per week. Pay patients were to advance, on entering, two weeks payment, the balance for the second week to be refunded if they left before that time. These charges went a long way toward defraying the expenses of the hospital. At the end of the first year the staff reported a total number of forty-four patients, twenty-six of them being county patients and the remaining eighteen pay patients. The new institution was a success financially as well as in every other way.

Early in these years county physicians were elected. Those who served often in this capacity were Bruno Jaehnig, O. I. Hall, A. H. Hall, O. K. Lindboe, Chas. Hill, A. T. Conley, Christian Gronvold, Galen Allen, J. V. Anderson, George Overholt, and W. L. Craddock. The salaries ranged from about fifty dollars to five hundred per year, depending on the size and population of the districts. Physicians were to furnish all medicines and all ordinary medical and surgical appliances. In 1889, we find the note that election and salaries of these men were determined without reference to applications or bids. This, apparently, was customary.

Epidemics of diphtheria were frequent in the county throughout the decade. Hardly a year passed without a minor epidemic in some locality. Some years the disease was more virulent. In 1880, several district schools were closed for a

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short while and Cannon Falls had a considerable number of cases. In 1887 diphtheria invaded the Scandinavian Orphans' Home at Vasa. In 1888 it reached East Red Wing and town authorities, faced at the same time by reports of numerous cases of measles, closed the schools there. The year before, also, measles had been prevalent in this district. The *Winona Republican* facetiously reported in December that the number of cases of measles in Red Wing had decreased to less than one hundred and the doctors were rapidly "knocking the spots off their patients." A rather measley insinuation, it was suggested.

Typhoid appeared in the tenements of Red Wing in 1880 and the next year appeared in the town of Goodhue, accompanied by a threatened water famine. Mumps, in this year, was reported as very common in Kenyon. There were small outbreaks of scarlet fever, particularly in 1888, in Red Wing and in Goodhue.

About this time there were several horses with glanders in Florence township. The horses were cared for by the state board of health, though not without local controversy. Dr. George Leininger reported the death of a man who had become infected with the disease.

Aside from these, there is the case of the removal of a tumor weighing fifty pounds from a woman. The tumor had been growing for over three years. Dr. Philo Jones, assisted by Drs. Leininger, Jaehnig, Hart, Conley, and Newhall performed the operation. The size of the growth suggests the slowness with which surgeons acted in the eighties and the general lack of confidence felt by the layman in such cases. This case, however, was reported to be favorable for recovery.

Apparently there were few, if any, cases of smallpox in the county. Yet precautions were taken, judging by the increased number of vaccinations under the direction of the state board of health, and by the establishment, in Red Wing, of a pesthouse in 1882.

Notices such as the following, printed in the local newspapers, were bringing the idea of preventive measures before the public.

State Board of Health of Minn.
Secretary's Office
Red Wing, Minn., June 1, 1881

Editors Republican:

May I through your columns, urge upon your readers the necessity of vaccination. Small-pox is being introduced into our state by immigrants. It has appeared in New Trier, Dakota County, and I go to Todd County today to deal with the outbreak there.

The people will protect themselves and help the State Board of Health to suppress such a dreaded disease, if they will see that all children are vaccinated, and that all persons over 16 years of age are re-vaccinated.

This last precaution is very important, and I believe, should always be taken under such circumstances as the present.

Very respectfully,

Charles N. Hewitt, Sec.
State Board of Health

P.S. Both vaccination and re-vaccination should be done by the family physician for whom the scabs of healthy children should be preserved, as there are many who prefer humanized to animal virus. Any surplus which physicians may have this board will be glad to distribute gratuitously. The animal virus may be procured fresh by sending one dollar to Dr. E. L. Griffin, Fond du Lac, Wisconsin, who will send by return ten points of such virus, enough to vaccinate ten persons.⁹

On the whole, such precautionary methods as sanitation and the isolating and reporting of contagious diseases were fairly well established.

9. *Goodhue County Republican*, June 4, 1881.

(To Be Continued in the April Issue)

President's Letter

PREPAID MEDICAL CARE

This is the liveliest issue before our profession today. It is too early to make any declarations forecasting what shall ultimately come out of it. Divergent opinion around the world is at zenith; where lives are wasted in battle to sustain or obliterate violently contrasting ideologies the individual fades into the background. Such periods of cataclysmic revolution are ideal to dethrone leadership and inaugurate the experiments of minorities.

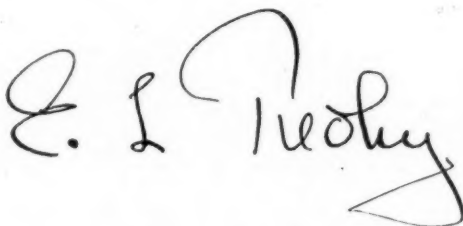
Wendell Berge, assistant attorney general of the United States, spoke in June before the American Urological Association in St. Louis. Public Health Reports* has the scholarly address in full as has *The Journal of Urology*. There are many reasons why every practicing doctor should read the thesis on *medical organization* of the present head of the department that prosecuted the American Medical Association in the famous Washington trial. In one of the most trenchant paragraphs he disposes of that individualism so much limelighted presently:

"... a job has come to replace an equity in the old homestead . . . industry is operated by corporations, farmers band . . . into co-operatives, . . . workers, . . . into unions . . . In our culture the group has come to be the regular thing."

In an attempt to implement your association with the movement to give physician-sponsored prepaid medical care to the public through a "nonprofit Medical Service organization," an enabling act is now before our legislature. At this writing this measure has had favorable committee action; it will not be passed unopposed. It may need your forceful help with your legislative representatives and senators. The opposition will come from some of Berge's "groups"; and I have at hand a good example from a "Co-op"† paper published in Superior, Wisconsin. The lead article characterizes our bill as "a move to throttle the possible advance of socialized medicine and *consumer-controlled prepaid medical care*." At a public meeting February 9, in Duluth, where a Minneapolis doctor led the discussion on "Medical Care for All," it is reported that the lines of advocacy and disapproval of the governmental *organization of medical service* were fairly evenly divided. One returned war veteran (in uniform) offered the most salutary comment. He reported that he had worked in the mines where he had a pay deduction entitling him to medical care; at the University he was provided health service; in the army he was likewise shepherded—but in all no doctor took any special or *personal* interest in him as an individual. We may have more friends here and there than we suspect.

*Public Health Reports, 60:1-6, (Jan. 5) 1945.

†The Co-operative Builder, Superior, Wisconsin, 20:1, (Feb. 8) 1945.



President, Minnesota State Medical Association.

Editorial

CARL B. DRAKE, M.D., Editor; GEORGE EARL, M.D., HENRY L. ULRICH, M.D., Associate Editors

STATE MEETING CANCELLED

FOR the first time in many years, the Minnesota State Medical Association will not hold its annual convention. Although national medical associations had cancelled their 1945 meetings, it was hoped that regulations would not include state medical meetings, and arrangements had already been made for a scientific program and exhibits for the proposed meeting, May 20-23, 1945.

The War Committee on Conventions, under the Director of War Mobilization and Conversion James F. Byrnes, requires organizations to show why proposed conventions entailing the attendance of more than fifty persons is necessary in the war effort. Transportation and hotel facilities are already taxed to the limit by necessary war activities and unnecessary travel. We shall doubtless win the war even if our annual meeting does not materialize. Not being able to show the contrary, permission to hold the meeting has been officially denied.

The House of Delegates, however, will meet at a date which will not conflict with the AMA House of Delegates. This will be either May 20, 21 or May 13, 14. As soon as the AMA date is definitely settled, our date will be designated.

The annual meeting provides numerous scientific papers for publication in MINNESOTA MEDICINE. Those who were to have appeared on the program have been asked to submit their papers for publication. Other members of the Association are also urged to submit papers read before county societies or other medical societies.

EPIDEMIC RINGWORM OF THE SCALP (*Tinea Capitis*)

ABOUT four years ago there appeared among school children in our eastern seaboard cities, notably in the Astoria section of the Borough of Queens in New York City, an epidemic of ringworm of the scalp due to the *microsporon audouinii* which has continued to spread progressively to large and small cities as far as Chicago and

Minneapolis and has become a problem of considerable proportions not only to public health and school authorities, but to the general practitioner, the dermatologist and their patients under fifteen years of age.

The use of suitably filtered ultraviolet light is valuable to detect characteristic fluorescence in the scaly patches of broken off hairs, and to make certain that the patient is no longer communicable to others after treatment. Susceptibility in childhood is general. Reinfection is common as there is no immunity after cure. Infection is very rare after puberty, although adults as well as children are susceptible to the *microsporon canis*. The disease spreads rapidly in schools, and in institutions for children. Control by public authority is difficult, but the principles involved are relatively simple.

1. All cases recognized among school children or discovered in systematic surveys of classrooms and schools with suitably filtered ultra-violet light, should be reported to the health department.
2. Infected children should be excluded from school until recovery. This may require several months of exclusion. In institutions, the infected should be separated from healthy children.
3. Stocking cap or other type of inexpensive head covering should be used on infected heads and such articles should be burned after use.
4. Terminal disinfection of classroom or home is not necessary.
5. The scalps of all children under fifteen years of age in a household or institution group in which cases have been found, should be examined by the appropriate ultra-violet light at regular intervals until the source case is completely cured, i.e., shows no fluorescence at the site of the scalp lesion.
6. On discovery of a clinical case of ringworm of the scalp, all children in the classroom should be inspected, and surveyed by suitable filtered ultra-violet light, and infected children excluded. Resurveys should be made periodically until one month after the last case is detected and excluded. If two or more classrooms are involved, or if more than 2 per cent of the children are found infected in a single classroom, the survey method should be applied to the entire school.

General measures should be encouraged, such as, cleanliness of hair and scalp, prompt and per-

sistent treatment of the infection, preferably by x-ray epilation followed by fungicide treatment on medical advice, education of parents as to methods of spread of the disease and measures for control, provision for individual storage of clothing in school. While the disease prevails it may be necessary to provide separate classrooms for education of children excluded from their regular classes because of scalp ringworm.

The only known source of this infection is the lesions on the scalp of infected persons; articles of clothing, especially hats and caps containing spores or infected hairs and scales shed by patients.

The infection is transmitted directly from person to person by contact with lesions of infected persons, especially in the home and in schools during games in which personal contact is close.

This disease is to be distinguished clinically and by microscopic examination of the fungus from ringworm of the body, including that of the groin and feet which affects adults as well as children.

HAVEN EMERSON, M.D.

Visiting Professor of Public Health
University of Minnesota

POLIOMYELITIS

IN SPITE of all the research which has been devoted to poliomyelitis, our knowledge does not provide means of prevention or specific cure.

We do know that poliomyelitis is caused by a virus. The causative relation of a pleomorphic streptococcus proposed by Rosenow has not been accepted by the profession. The infection attacks youths in most cases, although adults sometimes are affected. Many abortive cases occur during epidemics without ensuing paralysis. Although sporadic cases appear throughout the year, epidemics make their appearance in midsummer and cease with the advent of frost.

That most adults have at some time come into contact with the virus without developing symptoms of the infection is indicated by the fact that the blood of adults in most instances neutralizes the virus. It was previously thought that the virus entered the body through the nasal passages, which led to futile attempts to prevent infection by nasal treatment. The finding of the virus in the feces and sewage suggests that the virus enters the body through the digestive tract.

While the anterior horn cells of the spinal cord

are chiefly affected, resulting in muscle paralysis, there is evidence of widespread damage to the spinal cord and brain with changes in the posterior columns of the cord, perivascular infiltration of lymphocytes and polymorphonuclear leukocytes in the anterior horns and meningeal infiltration in all cases. Involvement of the brain stem results in respiratory failure and often death. Fortunately, in some cases all the anterior horn cells are not permanently destroyed, which permits some return of function. The involvement of the posterior columns of the cord may explain the muscle pain so frequently encountered.

The treatment of poliomyelitis has become a controversial subject. That spasm exists not only in the involved muscles but also in those uninvolved is generally accepted. The physiological effect of hot packs on the affected muscles is not clear. Some have questioned that it increases the circulation of the muscle. It does relieve pain, however, something that splints and casts did not do. The encouragement of voluntary use of the affected muscles during convalescence is most important. That local treatment of weak or paralyzed muscles can affect the destructive process in the cord is, of course, untenable. The new methods of treating poliomyelitis cannot influence the degree of paralysis, although it can produce better ultimate muscle function.

COMPULSORY HEALTH INSURANCE IN CALIFORNIA

THE California legislature is in the throes of a serious consideration of four statewide health insurance bills. One is for a compulsory health insurance to be conducted by the State and supported by a 3 per cent wage tax on employee and employer. This bill is backed by the CIO and the A F of L, but is opposed by business in general, the Association of White Collar Workers, the California Hospital Association and the California State Medical Association. The California Hospital and Medical Associations favor another bill which provides for voluntary medical insurance using funds derived from Unemployment Insurance to partially finance the new undertaking. Governor Warren is said to support still another.

California has its California Physicians Service which handles some 300,000 patients a year on a voluntary basis. Judging from their experi-

ence the Executive Secretary of the California Medical Association predicts that the funds which will be raised by the additional wage tax will fall short about one hundred million the first year. More millions of tax money will be required to initiate the undertaking, and the overhead will add more millions to the actual cost of medical care. The hospitals predict, and correctly, that they will not be able to care for the increased demands should the bill pass. California's 250,000 Blue Cross hospital insurance members have doubtless helped to fill California hospitals as in other states.

The argument that the extension of medical service through compulsory insurance would have reduced the 5,000,000 rejectees in the draft for World War II is used by those favoring the bill. It is pointed out, however, that if those who suffer from mental defects, cripples from natural or accidental causes, those with defective vision, and those with venereal disease were subtracted from this number it would leave 1,500,000, and it is questionable how much universal health insurance could have done for this number.

Many prepayment medical insurance plans have been instituted in various localities by medical societies. In seventeen states, these are statewide. Those that have succeeded so far are those with limited coverage of surgical and obstetrical fees. With some the overhead has been kept low by sharing the Blue Cross office setup. Insurance companies are more and more offering health insurance coverage for the more expensive medical costs. These and not the usual minor illnesses which make up the bulk of medical practice are what require insurance. If a state or the nation were to undertake full coverage for all medical expense, the cost would be enormous, but, of course, the taxpayers would make up the deficit. It will be interesting to observe the course of events in California.

LEO G. RIGLER—AN APPRECIATION

More than 100 friends of Leo G. Rigler gathered at a special dinner in Minneapolis, December 9, to wish him well. The occasion was the fall meeting of the Minnesota Radiological Society, and the guest speaker was Fred J. Hodges, Professor of Roentgenology, University of Michigan, Ann Arbor. Walter J. Ude, representing the Minnesota Radiologic Society and friends of the honored guest, gave nearly \$12,000 to the University

From the Staff Meeting Bulletin, Hospitals of the University of Minnesota, Dec. 15, 1944.

of Minnesota to establish the Leo G. Rigler Lectureship in Radiology. This was accepted by Dean H. S. Diehl. Speakers were Robert G. Allison, George E. Fahr, E. T. Bell and others. For some time the radiologists have wanted to express to Dr. Rigler their appreciation for his untiring efforts in their behalf. When his friends in other branches of medicine heard of this proposal, they, too, wanted to help. The sum accumulated so rapidly that it quickly reached the desired amount.

Leo George Rigler was born October 6, 1896, in Minneapolis. He attended the University of Minnesota, from which he received his M.D. degree in 1920. Following an internship in St. Louis City Hospital, St. Louis, Missouri, and practice in North Dakota, he was named teaching fellow in Internal Medicine, University of Minnesota (1921-22). The following year he was appointed Roentgenologist at Minneapolis General Hospital largely as the result of his interest in the Roentgen diagnostic aspects of Medicine. He was named Associate Professor of Radiology in 1927, and Professor in 1929. In 1935 he became chief in the department and has served in that capacity to date. In 1930 the State Board of Institutions made him a consultant. In 1941 the Minneapolis General Hospital named him chief of the Department of Roentgenology. Prior to accepting the departmental appointment, Dr. Rigler completed his studies in Europe spending most of his time with Professor Forssell in Sweden. Here he also learned to speak Swedish.

He is a member of Alpha Omega Alpha, Sigma Xi, American Medical Association, Hennepin County Medical Society, Minnesota State Medical Association, Minneapolis Academy of Medicine, Minnesota Academy of Medicine, American Roentgen Ray Society, Radiological Society of North America, Minnesota Radiologic Society, American College of Radiology (fellow), American Association of Thoracic Surgery and the American Association for the Advancement of Science. Civic activities include Council of Social Agencies, Jewish Family Service Association, Minneapolis Federation for Jewish Service, Foreign Policy Association and State Selective Service Association. He is married (Matil Sprung, 1920), and has three children, Stanley, Nancy and Ruth. Dr. Rigler is the author of *Outlines of Roentgen Diagnosis* (Lippincott), Second Edition, 1943, and many scientific reports.

As long as any of us can remember, Leo Rigler has been doing things for other people. The list is long and impressive. He has arranged and organized departmental conferences with most of the other departments in the hospital, as well as with the preclinical branches. He is always ready and willing to speak at medical gatherings and to teach special courses at the Center for Continuation Study. His contributions to graduate training include not only service to members of his own department but service to practically every other clinical department. He has been instrumental in putting life and vigor into the Minnesota Radiological Society and he has been active in the councils of national associations. In recent years he has made a large contribution to Wartime Graduate Medical Meetings through his visits to all the hospitals in our area. It is

at clinical pathological conferences that he is at his best, standing in front of the group, calling attention to what he sees and giving his conclusions just ahead of the pathologist with his postmortem report. He has been associated with roentgenology during its greatest period of development, and he has made a significant contribution to this specialty.

It is just and fitting that this honor should come to him. The only regret is that everyone who likes Leo and appreciates what he has done could not participate in the offering. The University of Minnesota has been a better place because of his contributions and all of us look forward to profitable years of association with him.

W. A. O'BRIEN, M.D.

MINNESOTA NURSING COUNCIL FOR WAR SERVICE

The Minnesota Nursing Council for War Service made the following statement on January 15, 1945:

"Because of the recent radio and newspaper publicity relative to drafting of graduate nurses we would like to have every one interested in nursing know the facts about Minnesota.

"A survey of nurses in Minnesota showed approximately 8,000 in the state. More than 2,500 nurses have volunteered for military service, about 800 from the St. Paul area. Minnesota oversubscribed their 1943 and the first six months of 1944 quota. Nationally the 8,000 nurse quota for military service for January 1 to July, 1944, was filled to within 2 per cent of the goal. At this point local committees were told that we need recruits for replacement only.

"The work of survey, of classification of procurement and assignment has been almost 100 per cent on a volunteer basis by nurses already carrying double work loads.

"The work of recruiting 60,000 students a year for the cadet nurse corps was also done by volunteer nurse service and Minnesota met each goal.

"We realize that the sudden change in the war situation, with the enormous increase in casualties, calls for more personnel. We have tried to get money for full time workers to assign to an increasingly complex job, but neither public nor private funds are forthcoming.

"Minnesota nurses and those over the country have long felt that a national service act might be the answer but we feel that if we could have full time workers, Minnesota would meet the quota of 537 set for January to July, 1945. To date 361 nurses have been classified as available and 240 have already volunteered."

EDITOR'S NOTE: The above is being published for general information because some of the publicity about this acute shortage of nurses in the various services have been rather disparaging to the nursing profession. The above explanation indicates that the nursing profession in Minnesota, particularly, has done its patriotic duty and there is every indication that the increased need for nurses will be met as promptly as possible. This does not minimize the great need for many more enlistments at once.

CLINICAL-PATHOLOGICAL CONFERENCE

(Continued from Page 210)

and negative bronchoscopic and bacteriologic studies. The lack of widespread metastatic involvement is also characteristic of this tumor. We were unable to find any source from a primary elsewhere in the body, including a careful search of the bronchi. Finally, the histologic structure is one of marked pleomorphism with some areas resembling epithelial-lined spaces and other areas distinctly sarcomatous. The resemblance to synoviomias arising from the synovial membranes of the joints is striking. Dr. E. T. Bell commented that this case was the most convincing he had ever seen of a mesothelioma of the pleura.

Discussion

DR. RILEY: The history of the present concept of the nature of primary malignant neoplasms of the pleura is a long and disputed one. Much of the discussion concerning this tumor rests upon the disagreement as to the embryological origin of the cells lining the pleura cavities. The Hertwigs showed years ago that the lining cells of the pleural and pericardial cavities developed from coelomic epithelium which split from the mesoderm. The name "mesothelium" is generally preferable to the term "endothelium" in describing the lining cells of the pleura. We should restrict the name "endothelium" to cells lining blood vessels and lymph spaces. The term "mesothelioma" is hence preferable to "endothelioma" in describing these tumors. There is no proof that these tumors arise from subpleural lymphatic vessels. The mesothelial cells have the ability to differentiate into more than one type of cell. Maximow¹, by tissue culture, showed that mesothelial cells can form fibroblasts and collagenous fibers. Young² produced a squamous and transitional cell metaplasia in the pleural cavities of rabbits by injection of sudan III and sodium cholate in olive oil. Tumors arising from the pleura have a tendency towards marked pleomorphism, as one would expect in view of their origin. The diagnosis of primary pleural malignancy should always be made with caution. Robertson³, in 1924, pointed out many of the earlier mistakes and showed that most of the reported cases were examples of metastatic tumors. These tumors are quite rare. In a recent article, Postoloff⁴ reported finding only four cases in 20 years at the Toronto General Hospital. Males predominate almost two to one, and the greatest number of cases occur between the ages of 40 and 60 years. Clinically there is usually an insidious onset with chronic pleural effusion. The course is a long and protracted one. One characteristic feature is the pain associated with thoracentesis. Often the symptoms of chest pain and dyspnea are made worse by aspiration. Metastasis is a late feature and usually not marked. There is no satisfactory treatment.

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MEDICAL ECONOMICS

Edited by the Committee on Medical Economics

of the

Minnesota State Medical Association

George Earl, M.D., Chairman

MINNESOTA'S ENABLING ACT INTRODUCED

The machinery for permitting the establishment of nonprofit prepaid medical service in Minnesota was set in motion recently by the introduction of an Enabling Act in both Houses of the Legislature.

The Committee on Public Policy, with Council approval, swung into action as a result of a mandate from the House of Delegates at the annual meeting last spring to prepare specific legislation for presentation to the Legislature.

Strong Backing from Legislators

The Bill received strong backing from legislators in both houses and was favorably reported out of their respective committees and placed on general order for early consideration.

The purpose of the Act is set forth in Section 1—"to make possible a wider and more timely availability of medical care, thereby advancing the public health and the science and art of medicine in this State."

The Act provides for incorporation by not less than twenty-one persons, "all of whom shall be legal residents of this State and duly licensed and registered doctors of medicine under the laws of this State," with a stated capital of not less than \$25,000 with which the corporation may begin business.

The full text of the Act follows:

A BILL

FOR AN ACT TO PROVIDE FOR THE INCORPORATION AND REGULATION OF VOLUNTARY NONPROFIT MEDICAL SERVICE PLAN CORPORATIONS; AND TO PRESCRIBE PENALTIES FOR THE VIOLATION OF THE PROVISIONS OF THIS ACT.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. It is the purpose and intent of this act, and the policy of the Legislature, to make possible a

wider and more timely availability of medical care, thereby advancing the public health and the science and art of medicine in this State.

Section 2. Every nonprofit medical service plan corporation shall be organized under and in accordance with the provisions of this act by not less than twenty-one (21) persons, all of whom shall be legal residents of this State and duly licensed and registered doctors of medicine under the laws of this State.

Such nonprofit medical service plan corporation shall have the right to establish, maintain and operate a voluntary nonprofit medical service plan, whereby the services of duly licensed and registered doctors of medicine are provided in the manner hereinafter specified at the expense of such corporation to persons who become subscribers to said plan under contracts which entitle such subscribers to specified medical and surgical care, appliances and supplies, by such duly licensed and registered doctors of medicine. Such medical and surgical care, appliances and supplies may be provided in their entirety or in part as such corporation may determine and as set forth in such contracts. The term "subscribers" shall include all persons covered under such contracts.

All such nonprofit medical service plan corporations shall be subject to, and, governed by the provisions of this act, and shall not be subject to the laws of this State relating to insurance, and insurance companies, except as hereinafter specifically provided.

No such medical service contract by or on behalf of any such nonprofit medical service plan corporation shall provide for the payment of any cash indemnification by the corporation to the subscriber or his estate on account of death, illness or other injury.

Section 3. Articles of Incorporation shall be signed and acknowledged by each of the incorporators and shall state the following:

- (a) The name of the corporation, such name not to include the words "insurance," "casualty," "surety," "mutual," or any other words descriptive of the insurance, casualty or surety business.

The corporate name shall not be the same as, nor deceptively similar to the name of any other domestic corporation.

- (b) Its purposes, which shall be in strict conformity with the provisions of this Act, and which shall

MEDICAL ECONOMICS

clearly set forth that all medical and surgical care provided a subscriber under such contract, shall be rendered by a duly licensed and registered doctor of medicine of the subscriber's own choice.

- (c) The name and post office address of each of the incorporators.
- (d) The duration of the corporation, which may be limited or perpetual.
- (e) The location and post office address of its principal office for the transaction of its affairs in this State.
- (f) Such provisions as may be desired, if any, defining the terms and conditions of membership therein which the incorporators may have agreed upon and which they desire to have set forth in such articles.
- (g) The amount of stated capital with which the corporation will begin business, which shall not be less than \$25,000.

Articles of incorporation may contain any other provisions, consistent with the laws of this State, for regulating the corporation's affairs.

Section 4. I. The articles of incorporation shall be filed for record with the Secretary of State. If the articles conform to law he shall, when all fees and charges have been paid as required by law, record the same and issue and record a certificate of incorporation which shall state the name of the corporation and the fact and date of incorporation.

II. Upon the issuance of the certificate of incorporation the corporate existence shall begin. Such certificate of incorporation issued by the Secretary of State shall be conclusive evidence of the fact of incorporation.

III. Within fourteen days after the issuance of the certificate of incorporation, the corporation shall cause to be published once in a qualified newspaper in the county wherein it has its registered office, a notice stating the name of the corporation, the date of its incorporation, the general nature of the business being, or about to be conducted by it, the address of its registered office, and the names and addresses of the incorporators and of the first board of directors. Proof of the publication of such notice shall be filed with the Secretary of State within ten days after its publication. If a corporation shall fail to comply with the provisions of this subdivision it shall forfeit to the State \$50.00.

Section 5. The Secretary of State, after recording in his office the articles of incorporation, shall file a copy of such articles duly certified by him, for record in the office of the Register of Deeds of the County in which the principal office of the corporation is situated and shall also file a like copy so certified by him, with the Commissioner of Insurance. There shall also be paid to the Secretary of State, for transmission by him to such Register of Deeds, and to such Commissioner of Insurance, a sum sufficient under existing laws to pay the proper fees of the Register of

Deeds and the Commissioner of Insurance for recording such instruments.

Section 6. No such nonprofit medical service plan corporation shall enter into any contracts with any subscribers for medical and surgical care, appliances and supplies, nor secure any applications therefor, unless there is actually available, in the corporation, for working capital, the sum of not less than \$25,000, and not less than three copies of each type of contract proposed to be issued by said corporation shall have first been filed with the Commissioner of Insurance; the sum contributed as the working capital of such corporation shall be repayable only out of surplus earnings of such corporation, and after adequate and reasonable reserves to assure the faithful performance of such contracts are provided for.

Section 7. Every subscriber under such nonprofit medical service plan shall receive a copy of the contract and such contract shall clearly state the medical and surgical care, appliances and supplies to be provided under such contract and the rate charged such subscriber. Every subscriber shall have, at all times, free choice of the doctor of medicine who is to treat him and such right shall be prominently printed in such contract. The personal and direct relationship between patient and physician shall not be restricted in any manner. No employee, agent, officer or member of the board of directors of any such corporation shall directly or indirectly influence or attempt to influence any subscriber in the choosing and selecting of the doctor of medicine who is to treat him.

Section 8. No nonprofit medical service plan corporation shall enter into any contract, agreement or understanding, directly or indirectly, with any physician and surgeon whereby such physician and surgeon shall render any services to any subscriber, but all such matters shall be a matter of agreement directly between the patient and the doctor of medicine selected by the patient to treat him.

Section 9. In case of emergency or expediency, and subject to the approval of the governing body of such nonprofit medical service plan corporation, the benefits to which a subscriber is entitled to under his contract, may be rendered in another state or country, provided such services are rendered by a duly licensed doctor of medicine in such other state or country.

Section 10. Every nonprofit medical service plan corporation may, as determined by its board of directors, or as provided in its articles of incorporation or by-laws, limit the benefits that it will provide, and may divide such benefits as it determines to provide, into various classifications, including general and special medical and surgical care benefits and such services and supplies as may be incidental to such medical and surgical care.

Section 11. The funds of every nonprofit medical service plan corporation shall be invested only in those securities and property designated by the laws of this state for the investment of the capital, surplus and other funds of domestic life insurance companies.

Section 12. All medical and surgical care rendered to a subscriber under his contract shall be in accord-

ance with the accepted standards of medical practice prevailing in the community in which such service is rendered.

All such medical and surgical services shall be rendered by doctors of medicine duly licensed and registered to practice their profession in the State of Minnesota, except as otherwise provided in Section 9 of this Act.

Section 13. No action at law based upon or arising out of the patient-physician relationship shall be maintained against any such nonprofit medical service plan corporation.

Section 14. Every such corporation shall annually, on or before the last day of March, file with the Commissioner of Insurance, a statement verified by not less than two of its principal officers showing the financial condition of such corporation as of the 31st day of December next preceding.

Section 15. The commissioner of insurance, or any deputy or examiner designated by him, shall have the right, at all reasonable times, to free access to all books and records of such corporation in all matters pertaining to its financial condition, and may summon and examine, under oath, the officers and employees of such corporation in all such matters. The expense of any such examination of its books and financial condition shall be borne by such corporation.

Section 16. A nonprofit medical service plan corporation may be wound up and dissolved either voluntarily or involuntarily. If the proceedings are voluntary, they may be conducted either out of court or subject to the supervision of the district court. If involuntary, they shall be subject to the supervision of the district court. In either event the dissolution shall be in accord with the proceedings for dissolution under the Minnesota Business Corporation Act.

Section 17. Any person, or any officer or agent of such a corporation, who violates any of the provisions of this act, or who shall make any false statement with respect to any report or statement required by this act, shall be guilty of a misdemeanor.

Section 18. Every corporation subject to the provisions of this act may, in the manner provided for in its articles of incorporation, amend its articles of incorporation in any manner not inconsistent with the provisions of this act.

Section 19. Nothing in this act shall authorize any person, association or corporation to engage, in any manner, directly or indirectly, in the practice of healing or the practice of medicine as defined by law.

Section 20. The various provisions of this act shall be severable and if any part or provisions shall be held to be invalid it shall not be held to invalidate any other part or provisions hereof."

Poll Reveals Minnesota Sentiment

That Minnesota would welcome the adoption of some form of low-cost family medical care on a monthly payment plan is borne out by a poll conducted throughout the state recently.

This poll disclosed that 83 per cent of the people of Minnesota favored some form of medical service similar to the existing Blue Cross program of hospitalization; that 48 per cent favored government sponsorship; 28 per cent, medical profession sponsorship; 21 per cent were undecided, and 3 per cent had no opinion. The geographical breakdown shows farmers are a good deal less inclined than city dwellers to approve a monthly payment plan like those incorporated in hospitalization contracts, probably because they participate less in group hospitalization.

To the question, "Do you believe doctors of medicine are doing a good, fair or poor job for your community?" 77 per cent voiced favorable responses.

There, apparently, is a much larger percentage of uncrystallized sentiment in Minnesota than on the National level where those favoring some sort of government control has run as high as 75 per cent in some polls.

Editorial Comment Favorable

Editorial comment relative to the Enabling Legislation proposed here is very commendable. The *Minneapolis Star Journal*, commenting on the appearance before the senate health committee of Dr. A. W. Adson of Rochester, Chairman of the Sickness Insurance Committee of the Minnesota State Medical Association, has this to say:

"Testimony of Dr. A. W. Adson of the Mayo Clinic Friday before the Minnesota senate health committee must have struck a responsive chord in many a breast. Gist of his testimony was that 'medical care should be extended to all classes regardless of their economic status.'"

Citing the benefits to wage earners, the editorial continues:

"The very rich and the very poor are better off in America than their counterparts anywhere in the world, as regards medical care. . . . But for many a man working for wages or on a salary there is a sense of frustration at each new story of a medical science triumph. He knows it either is not for him and his family or that he can get it by pledging himself to months or years of sacrifice. . . . What is wanted . . . is simply a revision of the economic structure of medicine so that adequate medical care can be brought within the capacity of wage and salary earners to pay without incurring crushing obligations of debt. Whether the revision should take the form of new insurance arrangements, more group practice or some other sys-

MEDICAL ECONOMICS

tem remains to be worked out. But it is encouraging to find Minnesota's senate busy on the problem and to know that men of the calibre of Dr. Adson back the reform."

However, it must be remembered, that enabling legislation is just a step in the direction of providing prepaid medical service. The next step will have to come from the medical profession, itself, to develop an organization that will put the plans into operation.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

J. F. Du Bois, M.D., Secretary

Henderson Physician Pleads Guilty to Narcotic Indictment

Re United States of America vs. Joseph A. Duclos, M.D.

On January 16, 1945, Dr. Joseph A. Duclos, seventy-two years of age, Henderson, Minnesota, entered a plea of guilty in the United States District Court at Mankato, to an indictment charging three violations of the Harrison Narcotic Law. In the first count, Dr. Duclos, a licensed physician, was charged with writing a fraudulent prescription for one Gust C. Lange, an informer for the Federal Bureau of Narcotics, the prescription calling for 20 ¼ gr. Morphine Sulphate Hypodermic Tablets, and being written for Lange under the name of Harold Erickson. The prescription was filled at the Knutson Drug Store at Chaska, Minnesota. In the second count, Dr. Duclos was charged with a similar violation of writing a fraudulent prescription for 22 ¼ gr. Morphine Sulphate Hypodermic Tablets for the same individual, and in the third count, Dr. Duclos was charged with selling 100 ¼ gr. Morphine Sulphate tablets to the same informer for the government for \$25.00. The Hon. Matthew M. Joyce, United States District Judge, suspended the imposition of sentence because of the defendant's age and the poor condition of his health. Dr. Duclos was put on probation for three years and warned by the Court that any further violation of the Harrison Narcotic Law will result in his being incarcerated in a Federal prison.

Dr. Duclos graduated from Laval Medical College at Montreal, Canada, in 1898. He was licensed in Minnesota by examination in April, 1902. He has spent his entire medical career at Henderson, Minnesota. Dr. Duclos has been ordered to appear before the Minnesota State Board of Medical Examiners and show cause why his license as a physician should not be revoked.

Minneapolis Abortionist Sentenced to One Year in Workhouse

Re State of Minnesota vs. Alida Toivonen

On February 13, 1945, Alida Toivonen, forty-six years of age, entered a plea of guilty to an information charg-

ing her with the crime of abortion. The defendant was sentenced by the Hon. Paul W. Guilford, Judge of the District Court of Hennepin County, to a term of one year in the Minneapolis Workhouse. Judge Guilford told the defendant that after she had served six months, she could apply to the Court for parole, but that in the event she was paroled, she would have to be on probation for an additional eighteen months.

The defendant, who holds no license to practice any form of healing in Minnesota, but who claims to have taken a correspondence course in nursing from the Chautauqua Nursing School, was arrested on February 1, 1945, by Minneapolis police officers, following an investigation of her activities by the Women's Bureau of the Minneapolis Police Department. The investigation was instituted after a twenty-year-old white girl was admitted to Minneapolis General Hospital suffering from the after-effects of a criminal abortion. The patient stated that she was pregnant by a Negro and that Mrs. Toivonen performed an abortion on her for \$35.00, the money being furnished by another Negro. The abortion was performed by means of instruments at the home of the defendant at 83 Royalston Avenue, Minneapolis, on January 22, 1945. The patient became seriously ill and was removed to the Hospital on January 25. Police officers in searching the defendant's home found numerous surgical instruments and a large variety of medicine. Bank books were also found indicating that the defendant had approximately \$10,000 in cash in various Minneapolis banks.

NEW HEALTH EDUCATION UNIT

A Health Education Unit has been established under the Preventive Medicine Service, Office of The Surgeon General, which combines the functions of the education branches formerly under the Tropical Disease Control Division, the Sanitation and Hygiene Division and the Venereal Disease Control Division.

The primary purpose will be to continue the health education of troops after they have received their formal training and to this end the new Unit will develop educational material on the individual soldier's role in malaria and typhus control, prevention of trench foot and other individual measures that protect the soldier's health. It will make use of many of the educational methods so successfully pioneered by the Venereal Disease Control Division.

Captain Granville W. Larimore, MC, former Chief of the Education Branch, General Disease Control Division, has been appointed Chief of the Health Education Unit. Assisting him will be Captain Vincent I. Hack, MAC, former Chief of the Education Branch, Sanitation and Hygiene Division.

ARMY NEUROPSYCHIATRIC NURSING SCHOOLS

Neuropsychiatric nursing schools are now in operation in five service commands and within the next few months will be established in all service commands in the United States. These schools offer a three-month, on-the-job training course under the country's leading neuropsychiatrists. Enrollment is made up of Army nurses who volunteer for the training and a certificate of neuropsychiatric nursing is awarded each on completion of the course. At least two neuropsychiatric nurses are assigned to each general hospital in this country and to the staff of each general hospital organized here for service abroad.

Minneapolis Surgical Society

Meeting of November 2, 1944

The President, Daniel MacDonald, M.D., in the Chair

CARCINOMA OF AMPULLA OF VATER

STANLEY R. MAXEINER, M.D., F.A.C.S.
Minneapolis, Minnesota

Although carcinoma of the ampulla has been reported and known to exist for a long time it has been of little surgical interest until recent years. Attention has been called to the fact that the lesion is small, metastasizes late or not at all and that it is open to surgical attack.

Halsted first excised a growth from the ampulla of Vater in 1898. This was a transduodenal operation from which the patient survived seven months. W. J. Mayo in 1900 and 1901 performed a two-stage operation for removal of a tumor of the ampulla. Codivilla in 1898 performed block removal of the head of the pancreas and a large section of the duodenum in one stage. A Roux Y type of gastro-intestinal restoration of continuity was used and the gall bladder was anastomosed to the jejunum. In 1913 Outerbridge reviewed 110 cases of carcinoma of the ampulla in which only 22 were treated by radical surgery. In more recent years greater impetus has been given to the attack upon this disease by the great surgical advances that have taken place. Among these are better pre-operative preparation of the patient, supportive treatment during surgery, better anesthesia and blood transfusions. Vitamin K has greatly reduced the threat of hemorrhage in the jaundiced patient. The recent works of Whipple, Parsons and Mullins, and Brunschwig have brought before the profession tremendous successes in this still virgin field of surgery.

Carcinoma of the ampulla of Vater, according to Springer, may arise from the lower end of the common bile duct, in the ampulla, the duct of Wirsung or from the mucosa within the duodenum. It remains a small lesion and spreads along the duct and the surface of the duodenum.

Because of its location it usually is productive of early symptoms. These may first be related to a general lack of well-being, anorexia, nausea, vomiting, anemia and loss of strength and weight. Jaundice usually appears early, the result of common duct obstruction but is not constant or necessarily progressive. It may be associated with pain so that this feature cannot be counted upon to differentiate it from common duct stone. Bleeding from an undisclosed digestive tract lesion accompanied by diarrhea of acholic stools should suggest carcinoma of the ampulla. The age incidence affords little diagnostic aid as it varies from thirty upward.

The preoperative diagnosis of common duct obstruction

is usual and operation is exploratory in purpose. Occasionally the distended gall bladder can be palpated and at operation Courvoisier's law is apparent. Whether or not surgical operation is indicated may be difficult to decide but the determination of an obstructive jaundice usually is conceded adequate cause for exploration.

Surgical treatment is either palliative or radical and is determined after weighing the findings. The presence of distended gall bladder and bile ducts and palpation of a small, hard, rounded mass at the site of the ampulla are the determining factors. However, Walters emphasizes the fact that 15 to 20 per cent of jaundice-producing tumors in the head of the pancreas are inflammatory in which case palliative measures are adequate.

Radical surgery consists of a transduodenal attack in which the ampulla, the end of the common duct and the duct of Wirsung, together with a generous amount of the surrounding duodenum, are removed.

The second radical procedure advocated and described by Whipple resects the head of the pancreas, common duct and duodenum and the immediate gland-bearing tissue. Several modifications are now advocated by others in attempted improvements and simplicity of technique but in principle, remain the same. The cut-off end of the pancreas may be anastomosed to the small bowel or it may be transected and ligated. In the first instance, external secretion is restored to the digestive tract while in the second instance it is lost completely. Drainage is essential to anticipate a leak of juice from the cut surface of the pancreas. The total loss of pancreatic juice is compatible with life as is also total removal of the pancreas.

Hunt, in a review of 124 cases from 1898 to 1941, found the surgical mortality rate to be, "29 per cent in ninety-three cases of transduodenal excision; 40 per cent in five cases of retroduodenal excision; 45.5 per cent in eleven cases of resection of the duodenum with implantation of the common duct or common duct and pancreatic ducts and end-to-end anastomosis of the duodenum, and 26.6 per cent in the fifteen cases of resection of the duodenum and head of the pancreas," an average rate of 30.6 per cent for the entire series.

Gray and Sharp quote Orr's discussion of Hunt's article as follows: "Following palliative operation a patient with proven carcinoma of the ampulla has been known to live thirty-three months; after transduodenal resection patients have lived four to twenty-two years; and after resection of the duodenum and pancreas one patient has lived thirty-four months, although the average length of life in each of these groups is much shorter. Orr summarized the findings of various au-

thors concerning the average time of survival of patients who had carcinoma of the ampullar region as follows: 7.3 months when no treatment was given (Outerbridge); 7.7 months when palliative operation was employed (Judd and Parker); eight months when treatment with radium and roentgen rays was given (Pack and McNeer); more than 1.7 years after radical operation according to Hunt's data on the thirty patients in his series who had died and more than 2.5 years after radical operation according to Hunt's data, on thirty-four patients who were living at the time of his report." Although, according to Hunt's figures, transduodenal resection presents the best outlook, the Whipple method subscribes best to the principles of radical surgical treatment of cancer.

Case Report

J. M. C., aged forty-eight, a laborer, height 5 feet 6 inches, weight 111 pounds, was admitted on June 13, 1944, complaining of jaundice and pruritus for the past six weeks.

About six weeks prior to admission yellow discoloration of the sclera was noted and remarked on by a fellow worker. Within a few days his skin became yellow, he consulted his family physician and was given some pills. In spite of treatment the jaundice became rapidly and progressively deeper, and his skin began to itch. At that time he noticed that his urine had become darker and his stools almost white. These symptoms persisted and became daily more intense. In addition, for one week prior to admission, he had mild diarrhea, some bloating after meals and his abdomen had begun to feel distended. There was a weight loss of 7 pounds in the past six weeks.

Past history was negative except for the usual childhood diseases; otherwise he had always been in good health.

Examination revealed a well-developed, well-nourished white male, small in stature, chronically ill, with a deep olive-yellow jaundice. The skin was covered with multiple superficial scratches. Temperature was 98.4°; pulse, 84; respiration, 18.

The abdomen was moderately distended and a firm, flat mass was palpable lying across the upper abdomen. This mass had an edge about four fingers below the costal margin and in addition a projection of this mass could be felt to extend down into the right lower quadrant which was thought to be a distended gall bladder. No tenderness or rigidity was present and although ascitic fluid was suspected, no fluid wave could be demonstrated. The spleen could not be palpated. There were no other significant findings on physical examination.

Pre-operative laboratory work revealed the following: Wassermann, negative. Blood count when rechecked a few days after admission showed red blood cells, 5,250,000; hemoglobin, 100 per cent; leukocyte count, 16,750; polymorphonuclears, 62 per cent. Icterus index was 64; Van den Bergh showed direct α -phasic reaction. The serum contained 13.2 milligrams bilirubin per 100 c.c.; in a few days it had risen to 14.2 milligrams. Prothrombin time was first reported 110 per cent of normal; a later recheck was 75 per cent normal. Blood N.P.N., 26.8; blood sugar, 73. Total serum protein, 5.66 milligrams. Urine showed 3 plus albumin with occasional cast and was positive for bile.

X-rays of the gastro-intestinal tract were normal except for a reported filling defect of the transverse colon just distal to the hepatic flexure. This defect was thought to be due to extrinsic pressure. X-rays of the chest revealed an irregular, nodular infiltration of the left apex which had not been present on x-rays taken February 14, 1940, and was diagnosed as tuberculosis,

chronic, pulmonary, minimal. Subsequent sputum examinations were negative for tubercle bacilli.

The abdomen was explored on July 5, 1944, through a right upper rectus incision. At operation no free fluid was found in the peritoneal cavity. The liver was markedly enlarged, was deep olive green, very firm and the edge extended to four fingers below the costal margin. The gall bladder was enlarged, markedly distended and thin walled. The common bile duct was dilated to the size of a thumb. An irregular mass about the size of a black walnut was palpated in the region of the ampulla of Vater. This mass did not have the consistency of a stone and was attached to the wall of the duodenum in the region of the ampulla of Vater and to the underlying pancreas. The pancreas was movable over the deep vessels and no nodes could be palpated in this region, in the hilum of the liver or in the liver itself.

Procedure.—The gall bladder was aspirated of bile stained fluid which on culture contained a nonhemolytic streptococcus of the Gamma type. An aseptic, anticolitic cholecystojejunostomy was done, using a long jejunal loop as recommended by Lahey as a first-stage resection of ampulla of Vater and head of the pancreas. The abdominal wound was closed with wire sutures.

His postoperative course was uneventful. The jaundice rapidly cleared from the sclera, his stools became brown and his urine clear. The skin, however, remained pigmented and during the first two or three days of his immediate postoperative course he was troubled with a mild atelectasis which, however, cleared under conservative treatment. Sputum studies at this time continued to be negative for tubercle bacilli but a type 18 pneumococcus was isolated.

Icterus index on July 21, 1944, was 26; bilirubin, 3.7 milligrams; Van den Bergh, direct diphasic. Icterus index on July 26, 1944, was 17; on August 3, 15, and on August 7, 11. N.P.N. on August 7, 38.9; chlorides, 478; sugar, 84; total serum protein, 6.05 gms. At that time bromsulphalein liver function test levels were as follows: 98.2 per cent dye retention after five minutes; 15.8 retention after thirty minutes; 11.4 retention after sixty minutes.

A flat radiograph of the abdomen revealed the intrahepatic duct system to be outlined with gas.

The second stage of the operation was performed on August 10, 1944, one month after the first stage was done. Weight at that time was 103 pounds.

Under continuous spinal anesthesia the abdomen was opened through a transverse incision. The adhesions were rather extensive in the region of the gall bladder and biliary ducts but they were not insurmountable. The mass in the region of the ampulla of Vater had remained about the same size and consistency. The cholecystojejunostomy was found to be functioning well. Following appropriate dissection the common bile duct was severed and ligated one-half inch below the junction of the cystic and hepatic ducts with chromic catgut. The retroperitoneal duodenum was severed just to the right of the superior mesenteric vessels and the distal stump turned in with three layers of chromic catgut and a layer of black silk. The stomach was divided at approximately the junction of its middle and distal thirds. The pancreas was severed just to the right of the portal vein. A small, undilated pancreatic duct found in the stump of the pancreas was doubly ligated with chromic catgut and the stump of the pancreas was transfixed with interrupted mattress sutures of chromic No. 1 catgut, and then buried in the retroperitoneal tissues. Thus a block of tissue containing the distal one-third of the stomach, the first, second and third portions of the duodenum, most of the common bile duct and the head of the pancreas was resected. Inspection of the bed from which this tissue was removed revealed a small lymph gland just to the right of the ligated stump of the common bile duct and this was removed for histological

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study. An end-to-side retrocolic gastrojejunostomy was made, using the jejunal loop distal to the functioning cholecystojejunostomy. The region of the stump of the pancreas was drained with a penrose drain through a midline stab wound incision. The wound was closed with stainless steel wire.

During this operation the patient received one blood transfusion, four units of plasma and a liter of glucose. He experienced no hemorrhage, practically no change in pulse rate or blood pressure and left the operating room in excellent condition.

The pathological report of the tissue removed revealed an adenocarcinoma of the head of the pancreas and metastatic malignancy in the lymph gland removed separately. The primary lesion was the ampulla of Vater.

His immediate postoperative course was uneventful. A pancreatic fistula followed removal of the drain and has been kept open to date because the patient gets severe abdominal pain when scar tissue contracture closes off the sinus.

On September 14, 1944, he developed acute, generalized abdominal pain with marked tenderness in the right lower quadrant of the abdomen with a white blood count of 25,000 and polymorphonuclears, 95 per cent. The abdomen was re-explored, he was found to have an acute appendicitis and the appendix was removed. His immediate convalescence from this was uneventful except that he began to lose weight and strength, and appeared to be fading out in spite of a prodigious appetite. His weight on September 30 was 85 pounds.

On October 1, 1944, we began collecting pancreatic juice from his fistula and feeding it back through a nasal tube. The pancreatic drainage was found to be 450 to 600 c.c. every twelve hours. Since that time the patient has gained in weight and strength steadily, and has improved markedly in general appearance until at the present time he weighs 98 pounds, is up and about and feeling well except for some intermittent abdominal pain.

This patient was operated upon by the radical techniques recommended by Whipple for carcinoma of the ampulla. His prognosis, as in all cases of malignancy, is necessarily uncertain. At the present time we have to contend with a persistent pancreatic fistula which may or may not close by itself. In case of a persistent drainage which seems altogether likely we must contemplate returning the flow of pancreatic juice to the digestive tract which may be done successfully by burying the fistulous tract in the side of the small intestine.

Discussion

MAJOR KEAN F. WESTPHAL: The patient wears a catheter cannulating the tract of the postoperative pancreatic fistula, and through this catheter the pancreatic fluid drains without difficulty and very little leakage. He has been taught to collect this fluid and to take the collected drainage morning and night through a nasogastric tube, which he has learned to insert himself. At the present time he is getting along nicely and is going home this week.

QUESTION: How much is he draining now?

MAJOR WESTPHAL: He drains between 650 to 1,000 c.c. in a twenty-four-hour period.

Since a small lymph gland discovered and removed from the region of the stump of the ligated common bile duct reportedly showed malignant change, it is ques-

tionable whether an attempt to close this fistulous tract is indicated.

QUESTION: What did you tie off the duct with?

MAJOR WESTPHAL: We used chromic No. 1 catgut mattress sutures to close the stump of the pancreas and the same material to doubly ligate both the pancreatic duct and the common bile duct.

QUESTION: How soon did he start draining?

MAJOR WESTPHAL: He started draining a sero-sanguinous fluid within forty-eight hours. This became gradually more sero-purulent. In about two weeks a string-like piece of necrotic tissue about three inches long was sloughed out. Culture of the slough revealed the presence of streptococci and staphylococci, but histologically its origin was not identified. Shortly after this slough came out, the drainage became serous and has continued to be so since that time. At first we did not think the drainage amounted to a great deal and we hoped the fistula would close spontaneously. However, the patient lost progressively in weight and strength and became quite apathetic. Attempts were then made to collect the fistulous drainage. We were surprised to find that it amounted to from 650 to 1,000 c.c. in a twenty-four-hour period. We immediately began giving it back to him through a naso-gastric drip and immediately his condition began to improve. The most remarkable change was the development of a voracious appetite and the loss of his apathy. He has been slowly gaining in weight.

DR. CLARENCE DENNIS: I should like to say one or two words. This has been a most interesting paper. Dr. Maxeiner has presented a very comprehensive view of the problems involved.

I have explored some twenty-four cases of carcinoma of the head of the pancreas in the past four years. At the University Hospitals, I believe there have been five resections in this time period, three from my series, one by Dr. J. R. Paine and one by Dr. R. L. Varco. Also, three cases of carcinoma of the ampulla of Vater have been locally resected, and a fourth has been subjected to radical pancreaticoduodenectomy.

In one case in which local excision was performed, the pancreatic duct was found not to be dilated. It was assumed therefore, that there were other ducts still patent, and this one was ligated successfully without attempts at anastomosis.

Surgery in this portion of the abdomen is complicated by the very high frequency of vascular anomalies. In one case of radical resection, Dr. Varco and I found the portal vein to pass in front of the pancreas. In another I found the hepatic artery to arise from the superior mesenteric and to traverse the head of the pancreas we were trying to resect before reaching the portal of the liver.

Doctor Maxeiner's has been a very instructive and interesting case, and I would like to commend him on his result.

DR. S. R. MAXEINER (closing): This patient has now had a pancreatic fistula over a sufficient time to have a thoroughly established tract. I believe it will be possible in a reasonable length of time to transplant the outer end of the sinus into the bowel and sidetrack all of the external drainage to its proper location in the bowel. We know that the patient had a carcinoma of the ampulla and with it, a metastatic gland. As a result, there is no logic in transplanting it until we are sure that the patient's duration of life will make this a worth-while procedure.

SURGERY IN RELATION TO CHRONIC NON-SPECIFIC ULCERATIVE COLITIS

Experience at the University of Minnesota Hospitals

CLARENCE DENNIS, M.D.
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Chronic nonspecific ulcerative colitis is not a common disease, but the misery and mortality of the patients suffering from it and the satisfaction to be derived from the proper management of it draw more attention than frequency alone would allow.

The cause of the disease is open to debate. Bargen points out properly that one must differentiate the disease under discussion from tuberculous colitis, colitis due to lymphopathia venereum, colitis due to amebic or bacillary dysentery, and other forms. He believes most chronic ulcerative colitis to be due to a diplostrep-tococcus. His view is not universally accepted, and a large portion of authors group the majority of these cases as "idiopathic" or "non-specific" chronic ulcerative colitis.

Other authors have offered various explanations for the disease. Some stress the functional factor. R. A. Jensen of our Psychiatric Clinic for Children, has studied eight cases in children rather carefully from the psychiatric angle. He found that these children all had rigid personalities, an unyielding character, set exact standards for themselves, were not free and spontaneous in type, and usually were more intelligent than the average. He feels that in each of these cases the onset of diarrhea has been related to some unusual circumstance in the family relationship. As a rule, no consideration had been given to the psychiatric aspects of these cases until the patients came here. Jensen was able to find special circumstances in the individual experiences of the children underlying each exacerbation of the disease, and in each case there had been smoldering suppressed resentment against the family. He felt that in any case of diarrhea in a child in whom no specific diagnosis can be made in two to three weeks, the psychiatric aspects of the problem should be considered. In many of the adult cases coming to the surgical service, some of us have felt that far too little attention has been paid to these considerations.

The importance of allergic reactions to a variety of foodstuffs has been stressed by numerous writers. Andresen is particularly impressed by the frequency of sensitivity to milk. Rowe has reported a small series of cases in which exacerbations of the disease were conclusively traced to inhalants such as ragweed and thistle pollen.

Various vitamin deficiencies have been incriminated, particularly those of the B-complex. Studies have been undertaken to determine the importance of variations in activity of the various digestive enzymes.

It is apparent that no single cause has been positive-

ly established and it seems likely that in each case a multiplicity of factors is at work.

Pathology.—The congested mucosa early becomes inflamed, bleeds easily on contact, and small hemorrhagic areas appear. Tiny abscesses form in these areas, and coalesce to form ulcers varying in size from pin-point to 2 or 3 cm. in diameter, with shaggy, undermined edges. As the process advances, more mucosa is destroyed, until in some cases only islands of mucosa remain, leaving a pseudopolypos. All the layers of the bowel become involved in the inflammatory process, with marked thickening and fibrosis. The walls of the colon become thickened and rigid, and as the lumen becomes smaller, actual obstruction occasionally occurs. Perforation with abscess formation or peritonitis is an important cause of death while hemorrhage from vascular erosion is the second important cause of death. Fistulae and abscesses about the anal canal are frequently seen. When pseudopolypos is present, malignant degeneration not infrequently occurs; pseudopolypos is therefore regarded as a strong indication for colectomy.

The pathology of the disease may vary considerably from case to case. At the Cleveland Clinic, Jones reported 93 per cent of the cases started with disease in the rectum, and then spread to upper segments with successive attacks. Others report a higher incidence of this type, and give the impression that widespread involvement, even to the cecum, or occasionally into the terminal ileum, is an early result of the disease. Localized segmental involvement occurs in about 5 per cent of the cases.

Symptoms and Course.—Ulcerative colitis may be classified under three general headings (Table I).

TABLE I. TYPES OF NONSPECIFIC ULCERATIVE COLITIS

1. The fulminating type.
2. The very mild type.
3. The more common type—marked persistently by sufficient disease to prevent near-normal activity or by frequent exacerbations of such severity.

1. Ulcerative colitis may be ushered in as an overwhelming disease characterized by profuse stools of blood, mucus, and pus passed fifteen to thirty times a day with high or spiking fever, prostration, abdominal cramps and pain plus signs of peritoneal irritation. It may subside in the course of a few days or weeks or it may progress to a rapidly fatal outcome on the basis of inanition, sepsis, peritonitis, or massive hemorrhage.

2. On the other hand, it may begin in an insidious fashion, with mild cramps or diarrhea, later presenting mucus in the stools. As the process advances and ulceration develops, the stools may occasionally become frequent, purulent, and bloody. It may remain a mild disease which responds at once to medical management. Apparently, a somewhat more common course, however, is a prolonged one characterized by exacerbations and remissions. Usually the patient never becomes entirely well, but gets along well enough to continue work except during the exacerbations. There is just-

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tification for medical management of some such cases.

3. Between the fulminating cases on the one hand, and the mild ones on the other, the majority of patients with ulcerative colitis will fall. The disease is constantly severe enough or marked by exacerbations of sufficient severity to prevent continuance at work or even at restricted activity. Chronic bleeding and loss of plasma, as demonstrated by Welch, lead to marked or moderate inanition and anemia, and these patients are difficult to handle because of loss of strength, impaired resistance to surgical procedures, and lack of ability to take an adequate diet without increasing the diarrhea.

The degree of weight loss in patients in the severe phases of the disease is greater than that seen in any other group of surgical patients at the University of Minnesota Hospitals. We have had several who have lost 35 per cent of the body weight, and one lost almost 50 per cent.

The complications of perforation, hemorrhage, and sinus formation have already been mentioned. Polyposis occurs only in the chronic cases, and carcinoma is a complication in this group. Arthritis, thrombophlebitis, achlorhydric gastritis, endocarditis, iritis, and other lesions seem to be late complications.

Diagnosis.—Diagnosis of ulcerative colitis is not usually difficult to establish, but to differentiate the chronic nonspecific type from other types is less simple. The patient usually looks chronically ill, underweight, and apprehensive. The abdomen is moderately to markedly tender to palpation. The chief complaint is usually of diarrhea, but may be of ischiorectal abscess, fistula, or other complication. The diagnosis of colitis is largely settled by examination of the stool for pus, blood, and mucus, proctoscopy, and barium enema x-ray examination.

The proctoscopic appearance is one of a swollen, congested mucosa with a granular appearance, which bleeds easily on contact, usually with myriads of small ulcers, and sometimes larger ones. There are usually no areas which look entirely normal.

Barium enema x-ray examination is usually fairly typical. Early in the disease there may be a fine featherlike irregularity of the mucosal pattern. Later the haustrations are partly lost; they are totally lost still later in the disease. Because of spasm and scarring, the lumen is decreased markedly and the bowel is shortened. The caliber is fairly uniform. All these changes give rise to the "lead pipe" appearance considered so typical of the disease. Ladd and Gross feel the wide distribution of these changes is characteristic, and that it serves to differentiate nonspecific from amebic colitis, which usually involves chiefly or solely the right colon.

Mention of the important conditions which must be differentiated is necessary. Tuberculous enteritis may be recognized by careful general study of the patient and ileac barium injection through a Miller-Abbott tube. The bacillary dysenteries should be excluded by blood agglutination studies. Amebiasis can usually be recognized by repeated examinations of the

fresh stool, but it is customary to give a diagnostic trial of emetine nevertheless.

Medical Therapy.—The number of different measures employed in the medical management of ulcerative colitis is testimony of the lack of specificity of any form of therapy. Certain measures are generally accepted as of definite value. Strict bed rest and a low residue or bland diet are usually effective measures for tiding over exacerbations. The use of the vitamin B complex, especially thiamine, and of liver extract seems to be widely accepted. Brewer's yeast, cevitic acid, and a host of other vitamin preparations have been added to the pot. Mackie has summarized present medical management and favors, in addition to the measures already mentioned, use of hydrochloric acid by mouth in those with achlorhydria, mild sedation, as with phenobarbital, and adequate mineral intake, bearing in mind that the involved colon is normally the site of absorption of most minerals. Andresen has called particular attention to the importance of allergic reactions to the development and perpetuation of ulcerative colitis, and favors elimination diets and a thorough allergic study on each patient.

As already indicated, more attention should be paid to the psychiatric study of these patients than has been the custom here in the past.

The advent of the sulfonamides brought new hope. Some are enthusiastic, but the general consensus of opinion seems to be that, although the bacterial count of the feces may be decreased by such drugs as sulfanilguanidine and succinyl sulfathiazole, yet no change in the course of the disease has been demonstrated consistently to occur.^{10,22,26,30,28}

Various other procedures, popular some years ago, such as irrigation of the colon with Dakin's solution, have been abandoned.

Medical Versus Surgical Management.—An extremely wide difference of opinion exists about the part which surgical intervention should play in the management of patients with nonspecific ulcerative colitis. Most of the publications up to a few years ago indicated the internist's horror of the plight of the patient left with a permanent ileostomy. It has been appreciated that this is a disease in which more or less prolonged remissions are the rule, and therefore the temptation has constantly been to delay active treatment in the sicker patients in the hope that such a remission might occur.

Examples of the diversity of opinion on the choice of procedure are illustrated by the following. Mackie advises a thorough trial of conservative management for several months preferably, and avoids surgical measures to divert the fecal stream from the colon until proctoscopic examination and barium enema study show that irreversible changes are occurring. Willard and associates are almost bitterly opposed to surgery in this disease, basing their contentions on the finding of a high death rate in those referred for surgery late in the disease. The general consensus of opinion among the surgical authors, however, seems to be that the

high mortality following surgical intervention has occurred in patients who have reached a terminal status before reference by the internist.^{7,10,13} Certain surgeons have suggested the performance of ileostomy in the first few weeks of the disease, for a fair portion of these recover and can successfully have the ileostomy closed.^{8,17,18,20}

A fair comparison of figures has been presented by Elsom and Ferguson, internist and surgeon, respectively, of the Hospital of the University of Pennsylvania. They selected two groups of patients with disease of comparable severity and treated approximately half by surgical procedures, and the remainder by the more conventional medical management. The findings indicated that in all respects, survival, weight gain, ability to return to work, and present health, those treated surgically did better than did those in the other group.

Surgical Therapy

Ileostomy—Indications.—The indications for surgical intervention are as diverse as the opinions of the value of surgery. Those listed recently in the surgical literature are fairly uniform, and include the following indications:

1. Emergency indications:
 - (a) Uncontrollable hemorrhage
 - (b) Acute ulcerative colitis with profound toxemia (fulminating cases)
 - (c) Impending perforation
 - (d) Obstruction
2. Elective indications:
 - (a) Chronic ulcerative colitis resisting all forms of medical treatment.
 - (b) Segmental ulcerative colitis.
 - (c) Very early ulcerative colitis.
 - (d) Polyposis including those cases with possible malignancy.

An impression of the variation in indications is gathered from the fact that at the Mayo Clinic the proportion of cases treated surgically has progressively declined from 20 per cent in the period from 1919 to 1923 to 1.4 per cent in the period from 1932 to 1936⁵, while in the same period at the Massachusetts General Hospital 65 per cent of cases were treated surgically.²¹ In a discussion published with McKittrick's report of these figures, Dr. Daniel Jones of Boston questioned whether the classification of cases as ulcerative colitis was uniform in all clinics, also the criteria of cure.

Prior to about 1930, surgical treatment consisted of appendicostomy, cecostomy, and occasionally colostomy. Garlock states, "The purpose of these procedures was to permit irrigation of the diseased bowel with medicated solutions in the hope of restoring the mucosa to normal. Experience in recent years has shown that this therapy was based upon fallacious reasoning. It is important to emphasize that the first requisite of successful surgical treatment is complete diversion of the fecal stream from the diseased bowel segment." This can be accomplished only by terminal ileostomy.

The general indications for major surgical interven-

tion, aside from drainage of abscesses, have been discussed. The procedure to be done in any of these circumstances is ileostomy. Attempts to close perforations have all been reported unsuccessful. Attempts to do primary large or small resections with primary anastomosis have all proved too risky save in a few cases of segmental disease in which the process was too quiescent to reveal the true nature of the ailment until examination of the specimen by the pathologist. In short, any patient with severe enough ulcerative colitis to require surgery needs an ileostomy first, and a period of months or even years should pass before further procedures are undertaken.

Technique of Ileostomy.—The manner of performance of ileostomy has received too little attention. It is probably true that most patients with ileostomy will heal the operative wound satisfactorily without special precaution, but it is virtually impossible to tell which of the patients seen will have more than usually irritating ileac drainage and will therefore develop breakdown of the wound. The procedures recommended in the literature uniformly involve bringing a single-barrel or a double-barrel ileostomy out through the wound, and closure of the wound about the bowel. This type of procedure has been abandoned at this clinic.

These patients are regularly in extremely poor condition, and shock is easily induced. McKittrick's conclusions are in agreement with our own, that spinal anesthesia certainly should not be used for ileostomy, and general anesthesia also is better avoided. He favors the use of local anesthesia insofar as possible, a choice we also have adopted.

Response to Ileostomy.—Following performance of ileostomy, all are agreed that the majority of patients improve rapidly. The temperature frequently returns to normal in one or two days, the appetite returns, the rectal discharges diminish quickly, and thereafter the weight gain is marked and fast. One of our patients gained 56 pounds in two months after ileostomy. Those for whom the ileostomy is done as an emergency for bleeding have generally been observed to cease to suffer hemorrhage within a few days.

Other Factors in the Performance of Ileostomy.—The most trying complication of ileostomy is digestion of the wound by the unspent ferments of the ileac secretions. If the wound is not carefully protected early, the line of closure in the wound adjacent to the ileostomy is likely to break down and suppurate. Healing of such defects is slow and painful, for the wound is constantly soaked with intestinal discharge, and the ultimate results are not satisfactory. A wound so healed is ever subject to fresh digestion and can make the patient miserable indefinitely. Most satisfactory elimination of this problem has been accomplished by bringing the proximal end of the ileum out through a stab wound apart from the main incision. The distal end is closed and returned to the abdomen. The bowel

heals to the skin readily, and this process seems seldom to be delayed by secretions.†

Digestion of the skin about the ileostomy is equally trying. Apparently somewhat more than half of these patients have little difficulty regardless of the care given, but the others suffer from obstinate erosion of the skin. There are repeated references in the literature to the belief that this erosion subsides as soon as the involved colon has been removed. This has not been our experience here.

Various methods have been proposed to treat this skin erosion, but all are agreed that prevention of it in the first place is far simpler than management after it has developed. Most authors say little of this trouble, but careful reading of their reports indicates that the patients must have been made miserable by this complication. Numerous pastes and ointments have had their day, but in the experience of the Clinic here, that of Ladd and Gross is the only satisfactory one. They recommend a combination of zinc oxide ointment, castor oil, and aristol, made up into a thick paste. Others have favored yeast paste or aluminum paste. Pressman suggested use of a vinylite resin preparation which can be coated onto the skin, but this layer is quickly freed from the skin by the ileac secretions, and therefore gives little protection.

John R. Paine called our attention here to the use of the Koenig ileostomy bag, a description of which was published by Baker.* This bag has a rubber facing which is fixed with rubber cement to the skin about the ileostomy stoma. The bag facing has an opening made to order to fit about 2 mm. around the slightly projecting bowel. In my experience, the use of rubber cement and rubber dam to protect the skin in the first few postoperative days, until a bag can be fitted, offers an excellent means of prevention of ulcerations and erosions. This may also be accomplished with Ladd and Gross' paste. The bag in my opinion offers the only satisfactory way to care for the ileostomies in these patients after they have become ambulatory.

Further Surgical Management.—In general, the opinion of those dealing with this disease is that colectomy should be done if two bouts of acute colitis occur after ileostomy. It should also be done if pronounced drainage continues for more than a few months after ileostomy. Pseudopolypoidosis is precancerous and should dictate both ileostomy and colectomy, but the last 12 cm. of rectum, which can be watched with the proctoscope, may be saved in the hope that later healing will permit ileoproctostomy.

In performing colectomies, McKittrick, Lahey, and Cave have recommended staged operations, utilizing as many as four procedures to complete removal of colon and rectum, and they all suggest the upper end of the segment left after each operation be brought through the abdominal wall as a mucous fistula, for secure closure cannot be assured in the involved colon.

†The details of the technique employed at the present time are published elsewhere. (*Surgery*—In press).

*This is now obtained from H. W. Rutzen, 1819 Irving Park Road, Chicago.

In the experience here this procedure has proved nearly disastrous, and we feel that if the entire colon is to come out, it should be removed with the rectum, if the rectum is to be removed, in one stage, for this has given excellent results. The leaving of a mucous fistula has led in at least one instance to marked persistent pyoderma and deterioration of the patient, compromising subsequent management.

Rankin recommends removal of the colon to a point below the peritoneal reflection with inversion of the end and closure of the peritoneum above the closure. The rectum can then be observed at intervals, and, if sufficient healing occurs, ileoproctostomy may subsequently be done. Adequate inversion has been difficult to obtain, for the walls are thickened and infected, and the lumen is small; pelvic abscess was a frequent complication until methods of secure closure were developed. These are to be reported elsewhere.‡ This is nevertheless the procedure of choice, particularly in males, in whom impotence is the usual sequel of proctectomy.

A final type of procedure should be mentioned, namely, reconstitution of the normal fecal pathway, either by simple closure of the ileostomy or by anastomosis, at some time after ileostomy, of the end of the ileum to the lower sigmoid or upper rectum with removal of the intervening bowel. Either of these procedures is predicated on prior complete healing of the bowel from the proposed anastomosis to the anus.

Stone, Ladd and Gross, and Cattell have all reported series of cases of successfully closed ileostomies. They all stress that ileostomy must be done very early in the disease if subsequent closure is to be tolerated without recurrence of symptoms of colitis.

Experience with Chronic Ulcerative Colitis at University of Minnesota Hospitals 1934 to 1944

In the ten years from January 1, 1934, to January 1, 1944, eighty-two patients with chronic or acute non-specific ulcerative colitis have been seen at the University of Minnesota Hospitals. Fifty-seven of these have been treated solely by nonoperative means as far as the ulcerative colitis is concerned, although some of them had drainage of perineal abscesses or other incidental surgery performed. Three patients are included in this group who were treated by conservative means until death was inevitable, and then were subjected to operation. (Two of these came to operation with perforation, massive pneumoperitoneum, peritonitis, and marked inanition; the third after having been septic and comatose for several days.) It should be emphasized that comparison of results achieved by conservative as opposed to operative management is not to be construed as a comparison of the relative merits of one Department in the hospital as against another, but rather as a comparison of methods of therapy. Many of these managed conservatively early in the period of this study were treated on the Surgical Service. We are fortunate here in that the co-operation between the Medical Service and the Surgical

‡*Surgery* (In press).

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TABLE II. GROSS MORTALITY FIGURES OF CONSERVATIVE VERSUS SURGICAL MANAGEMENT
ULCERATIVE COLITIS

	No. of Cases	Died under therapy		Died later	Total mortality	
		No.	%		No.	%
Conservative	57	16	28	0	16	28
Surgical	25	2	8	1	3	12
Total	82	18	22	1	19	23.2

TABLE III. CAUSES OF DEATH IN CASES OF ULCERATIVE COLITIS TREATED CONSERVATIVELY

1934 to 1944 University of Minnesota Hospitals

Died solely of disease proper.....	10 ¹
Died of complications of chronic ulcerative colitis...	4 ²
Died of other disease plus chronic ulcerative colitis...	2 ³
Total	16 (28%)

1. One was admitted terminally and died in three hours. Three went through surgery on the way to the morgue; one had spesis and coma for days, two had perforations.
2. One of sepsis, one of thrombophlebitis, two bronchopneumonia.
3. One obstructive jaundice and cerebral hemorrhage, one myxedema.

TABLE IV. STATUS OF PATIENTS WITH ULCERATIVE COLITIS TREATED CONSERVATIVELY WHEN LAST SEEN

1934 to 1944 University of Minnesota Hospitals

Improved	19
Unimproved	18
Worse	4 ¹

1. Two of these refused ileostomy and left.

Complications: Large psychiatric component..... 12
Polyposis 4
Others 3

Service has been excellent, at least throughout the period when I have observed it.

Twenty-five individuals were treated surgically for ulcerative colitis.* These cases have excited the interest of various members of the surgical staff and have therefore been carefully followed, while there has been no one particularly interested in those treated conservatively, and the follow-up in a large proportion of those cases is nonexistent or only of a few weeks.

A comparison of the overall mortality figures of conservative as against surgical management is offered in Table II.

The medical therapy is not the subject of this review. An analysis of the causes of death in the conservative group is given in Table III. It should be borne in mind that the follow-up was poor and that many of those listed as surviving have probably since died.

The status of those surviving on conservative management is given in Table IV.

The indications under which surgery was undertaken and the results thereof are indicated in Table V.

As has already been stated, a great deal of trouble was encountered in the healing of ileostomy wounds until the adoption of the method of ileostomy indicated

*The author wishes to stress that the care of these patients was a joint effort. First Dr. O. H. Wangenstein, and later Drs. W. T. Peyton, W. H. Manson, and John R. Paine have been active in the care of these patients, and many of the conclusions presented in this paper, and certainly many of the successful cases, come from the efforts of this group as a whole rather than from the writer alone.

TABLE V. INDICATIONS FOR SURGERY IN ULCERATIVE COLITIS 1934 to 1944 University of Minnesota Hospitals

	Fulminating disease	Hemorrhage	Progressive disease	Sealed Perforation	Polyps	Total
Ileostomy	7	1	10 ¹	1	1	20
Colostomy	1 ²					1
Segmental Resection			1			1
Primary Colectomy and Ileoproctostomy			2			2
Primary Total Colectomy and "Pull-through"			1			1
Total	8	1	14	1	1	25

1. One death due to improper surgery.
2. Patient died.

TABLE VI. INCIDENCE OF WOUND BREAKDOWN IN ILEOSTOMIES

1934 to 1944 University of Minnesota Hospitals

	Primary Healing	Disruption of Wound	Late Hernia or Prolapse	Late Stenosis
Ileostomy made in incision	14	7 ¹	3	1
Ileostomy made as described	6	0	1	0

1. Three healed after 1 to 12 months. Three were redone after 6 months to 3 years. One died from massive wound breakdown and skin excoriation.
- Total ileostomies 27
Total ileostomy patients..... 22

above. The results with ileostomy are indicated in Table VI.

Evaluation of the factors contributing to erosion of the skin is impossible because there are inadequate notes in the charts concerning care of the skin, but in several of the earlier cases in which the measures outlined were not used, extreme erosion occurred. One case required transplantation of the ileostomy because of erosion alone, and another died of erosion and wound breakdown. In the cases in the past one and a half years, which is the time in which the ileostomy has been made as described and in addition carefully protected by rubber dam and cement, there has been none but the most insignificant erosion.

Fourteen patients have been subjected to colectomy of one type or another, and there have been no deaths in association with these operations, all patients being alive at the end of the study period. The present status of these patients as well as that of those not yet having undergone colectomy is indicated in Table VII.

Comment.—One rightly concludes from Tables V and VII that we have ample evidence in our own series of cases that when operation is necessary in the management of ulcerative colitis, the procedure should be ileostomy and nothing else, for no other procedure has left us with a good result without subsequent operation. In other words, "shortcut" operations made in an effort to spare the patient one operation and the inconvenience, even if temporary, of an ileostomy have not been successful.

It is my impression, therefore, that the colon should be put at rest for a period of months or years and until complete subsidence of the inflammatory process in the

MINNEAPOLIS SURGICAL SOCIETY

TABLE VII. PRESENT STATUS (JAN. 1, 1944) OF PATIENTS SUBMITTING TO OPERATION FOR CHRONIC

	1934 to 1944 University of Minnesota Hospitals			
	Good 3 ¹	Fair 3 ²	Poor 2 ³	Dead 2 ⁴
Ileostomy only				
Ileostomy, later colectomy including rectum	4	1 ⁵	1 ⁶	0
Ileostomy, later colectomy leaving rectum	2	0	0	0
Ileostomy, later colectomy and anastomosis to sigmoid or rectum	1	1 ⁷	0	0
Primary colectomy and "pull-through"—subsequent ileostomy	1 ⁸	0	0	0
Primary colectomy and ileoproctostomy	0	1	1	0
Segmental colectomy	0	1	0	0
Colostomy	0	0	0	1
Total	11 (45.8%)	7 (29.2%)	4 (16.7%)	3 (8.3%)

1. One of these is now seriously ill (May 1944) after effort at resection and anastomosis to involved rectum. Recovered.
 2. One still has some rectal discharge, one has Simmond's Disease and one had skin erosion when last seen, 1941.
 3. One refused colectomy for polyps and has carcinomatous now. One has cancer, presumably.
 4. One died of cancer of rectum; one of improperly done ileostomy.
 5. Had only mucosa of rectum removed—still drains.
 6. Has ventral hernia and poor healing of perineal wound.
 7. Has small (3 cm.) ventral hernia. Later repaired.
 8. Very poor control after first operation; erosion of skin of perineum and buttocks, weight loss, pain. Later had ileostomy improperly done, later properly revised, now well.
- N.B. 4 cases of polyposis—2 of these developed cancer, possibly a third.

rectum or lower sigmoid before attempts are made to remove the colon in these patients and anastomose the ileum to the pelvic colon.

In the majority of patients with advanced disease, this reanastomosis will never become feasible. In those given ileostomy very early it may become the rule.

Conclusions

1. Careful surgical management seems to offer patients with nonspecific ulcerative colitis better hope of survival and good health than the medical therapy employed today.
2. Heavier emphasis should probably be placed on the psychiatric aspects early in the disease. It is possible that combination of this and early ileostomy will offer more effective therapy than we have had in the past.
3. When surgery is necessary, ileostomy is the procedure of choice. If it is done properly, the artificial anus causes most patients little difficulty.
4. Colectomy is indicated for polyposis, recurrent bouts after ileostomy, or hopelessly damaged colons. It should be done in one stage.
5. Very early ileostomy should be contemplated in a series of cases to test the promising suggestion that closure with good results will later be possible.

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Discussion

DR. HARRY W. CHRISTIANSON: Thrombocytopenic colitis-idiopathic ulcerative colitis is a disease of manifest fascination and intrigue, which, during twenty-five years past, has occupied a prominent position in medical literature. Primarily, I feel, it is a systemic disease, the cardinal lesions of which are localized in the colon. It might be said, that in resorting to surgery in its management we accept an attitude of defeatism. A few years ago I firmly believed that surgery was to be resorted to in but a limited number of cases, namely, those with serious complications. Further, it seemed that the disease was firmly entrenched in the wall of the colon and, hence, the performance of an ileostomy allowed the diseased bowel to remain behind, to be dealt with at a later date. One assumed that ileostomy, therefore, merely complicated the situation by adding a "second rectum."

It is apparent that surgery has a greater role in the management of ulcerative colitis. Dr. Dennis advocates ileostomy early in the course of the disease, earlier than has heretofore been generally suggested. In retrospect, and in reviewing the presented data, it seems that we

have been tardy, if not reticent, in suggesting ileostomy in the management of this disease.

At the outset it is to be understood that we are considering thromboulcerative colitis and excluding any of the other types of ulcerative colitis, such as tuberculosis, amebiasis, allergic colitis, colitis with avitaminosis, bacillary colitis, lymphogranuloma venereum or the unknown types 2 and 3 of Bargen.* These are separate and distinct entities which must be painstakingly excluded by exhaustive clinical study and laboratory procedure, in order to establish the differential diagnosis. Each requires separate and distinct therapy.

Although ileostomy seems, at this time, to be of considerably more value in the management of ulcerative colitis than was formerly believed, I cannot as yet concur with the present suggestion as to the exact time of its performance. To do an ileostomy in every early case which exhibits an insufficient or delayed initial response to medical or conservative management seems too radical an approach. I have had the opportunity to observe a large number of patients with this disease who responded well to conservative therapy. As I see them today, fully recovered, I would have felt guilty, in the least, had I subjected them to the hazard and discomfort of an ileostomy; for, in the majority of hands this procedure is fraught with difficulty and danger. The surgical skill and ingenuity manifested by the excellent results Dr. Dennis has presented, might distract us from the real dangers attendant to this procedure. He has developed a meticulous technique together with a painstaking and exhaustive pre-operative and postoperative regime of care in the management of these patients. Further, in this connection, it is interesting to note that this procedure is only effected, in his hands, under local anesthesia.

Certain fairly definite indications for ileostomy and probably for subsequent partial or total colectomy, seem apparent at this stage in development of our knowledge of the management of thromboulcerative colitis. On the other hand, certain other situations encountered in this disease seem to contraindicate these surgical procedures. Ileostomy does not seem advisable as an emergency measure; nor does it seem advisable in instances of perforation of the bowel, or of acute fulminating thromboulcerative colitis. Stricture formation, pseudo-polyposis or dual abscesses and fistulae, regardless of the time element, constitute indications for ileostomy. Early thickening of the bowel wall, because of its potentiality for forming intramural abscesses, constitute an absolute indication for ileostomy. The development of polyposis or pseudo-polyposis in the colon of ulcerative colitis renders ileostomy mandatory, coupled with a subsequent colon resection. The occurrence of multiple anal abscesses or fistulae dictates the almost immediate performance of an ileostomy.

To withstand surgical procedure the patient with ulcerative colitis must be in comparatively satisfactory condition. Manifest starvation and exhaustion, so often noted in patients with this disease, when it has been allowed to progress, constitutes a situation most difficult to adjudicate. Further unimpeded progression of the disease leads unequivocally to rapid exodus, while on the other hand, the addition of the surgical trauma of an ileostomy most frequently eventuates in the same conclusion. The status of this patient is already so far gone that recovery cannot be effected. The physiological pre-operative preparation of these patients, as employed by Dr. Dennis, considerably reduces this hazard. However, we are in agreement on the point that the patient should not be allowed to progress to this extreme status of affairs, but rather, that an ileostomy should be performed sufficiently early to obviate this possibility.

The time for the performance of a colectomy, after preliminary ileostomy, must be ascertained in each indi-

vidual case. I agree that one should not be in haste, but, rather, that one should allow sufficient time to elapse in order to ensure complete subsidence of inflammation of the affected bowel. In some cases the rectum can be preserved and an ileoproctostomy effected. This procedure should be reserved for those ileostomy patients in whom the stools have become solid (all suggestion of watery or liquid stools or diarrhea has subsided). Further, before this procedure can be contemplated all inflammation and ulceration in the rectum must have abated.

In conclusion, I wish to state that Dr. Dennis should be commended for his painstaking labors in obtaining his remarkable results. Thromboulcerative colitis constitutes a severe and mysterious malady with which in many respects we are still unfamiliar, and, it is only with work such as that which has just been presented that progress is made.

DR. DENNIS (closing): I would like to add a few words. In the first place, I am very flattered to have been asked to talk tonight. It has been a much appreciated privilege.

I want to say a word about Doctor Christianson's remarks. I am impressed with his bringing out one indication for ileostomy which I had overlooked, and that was the matter of abscess and fistula formation in the rectum. I happen to know of one case in which this was the indication for which ileostomy was performed. Doctor Paine did the procedure, as that was before my interest in the disease.

In this matter of hemorrhage, my series has been limited to but one case, so what I say about hemorrhage should be taken with many grains of salt. In this case bleeding was profuse, over a liter of blood every day before ileostomy.

The conclusions in the patients we have been able to follow are that the patients who develop ulcerative colitis are never entirely free of trouble and are always subject to exacerbations of the disease.

I am glad Dr. Christianson brought out the matter of the type of colitis under question. My comments have been intended to apply to nonspecific ulcerative colitis, and not to the other types.

ERNEST R. ANDERSON, M.D.
Recorder

PEDIATRIC-PATHOLOGICAL CONFERENCE

(Continued from Page 208)

of life. The less accessible rectal fistulae may at times be better corrected when the child is older. Those near the perineum can frequently be closed without much difficulty.

Final Diagnosis.—(1) Congenital anal stenosis, (2) fecal impaction of rectum, (3) chronic partial intestinal obstruction, (4) emaciation.

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*Type 3 of Bargen represents the form involving the rectum and rectosigmoid. Type 2 involves the remainder of the colon, not the rectum and rectosigmoid.

Minnesota Academy of Medicine

Meeting of December 13, 1944

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, December 13, 1944. Dinner was served at 7 o'clock and the meeting was called to order at 8:15 by the president, Dr. Walter E. Camp.

There were forty-one members and three guests present.

Minutes of the November meeting were read and approved.

The annual election of officers was held and the following members elected to serve for 1945:

President, Dr. A. G. Schulze, St. Paul

Vice President, Dr. S. E. Sweitzer, Minneapolis

Secretary-Treasurer, Dr. J. A. Lepak, St. Paul

Dr. A. R. Hall read the following Memorial to Dr. Max Hoffman, and a motion was made and carried that this be spread on the minutes of the Academy and a copy sent to the family.

MAX HOFFMAN, M.D.

1896-1944

Dr. Max Hoffman, a member of the Minnesota Academy of Medicine since 1931, died at Mahtomedi on August 21, 1944, at the age of forty-eight.

Dr. Hoffman was born in Saint Paul on May 4, 1896, the son of Jacob and Esther Hoffman.

He received his early education in the schools of Saint Paul and took his undergraduate medical studies at the University of Minnesota where he received the degrees of M.S., M.B., and M.D., in 1920. As an undergraduate he was elected a member of Sigma Xi. He served his internship at the University Hospital in Minneapolis. Following his internship he was for one year a fellow in Internal Medicine at the Peter Bent Brigham Hospital in Boston. At the end of his fellowship he opened an office in Saint Paul and he maintained an office there until the time of his death. He limited his practice to Internal Medicine but he was particularly interested in endocrinology. For some time he had a laboratory at the Miller Hospital for the study of the sex hormones. During the past two years he had a clinic in endocrinology at the University of Minnesota Medical School. For several years he taught clinical medicine at the Ancker Hospital to students of the University of Minnesota. At the time of his death he was a Clinical Assistant Professor of Medicine at the University of Minnesota.

Besides being a member of the Minnesota Academy of Medicine, he was a member and past president of the Minnesota Society of Internal Medicine. He was a member of the Central Society for Clinical Research, the Minnesota Pathological Society, the American Medical Association, the Minnesota State Medical Association, and the Ramsey County Medical Society.

MARCH, 1945

Dr. Hoffman was recognized as an authority in Internal Medicine. He had many attributes which made him stand out as a doctor. He was absolutely honest in his contacts with his fellow men and in his reporting of his experiences in medicine. He had the ability to evaluate what he read and saw, and he had the will and energy to continue to be a student in medicine. He would have contributed much to the study of medicine had not his untimely death cut him off.

He had been in his usual health until a few days before his death. During these last few days he had experienced slight pain in the chest. This was not severe and did not keep him from his work nor prevent him from playing golf the day before his death. On the evening of his death he dined and spent the evening as the guest of some friends. While with these friends he was seized with severe pain in his chest and asked to be taken to the home of a medical friend who lived near by. He died a short time after arriving at the home of this doctor.

In appreciation of his work, some of his friends and former patients are establishing a fund to be known as the Max H. Hoffman Memorial Fund. This is to be given to the University of Minnesota to establish a Fellowship in Endocrinology to help carry on the work in which he was interested.

Dr. Hoffman is survived by his mother, a brother Edward, and a sister Mrs. Mort Bentson.

The Committee:

C. B. DRAKE

H. B. ZIMMERMANN

A. R. HALL, *Chairman*

The Secretary read a letter to the Executive Committee from Dr. Gustav Schwyzer requesting that his name be placed on the Senior list of the Academy. The Executive Committee approved the transfer and a motion was carried that this be done.

The scientific program followed:

TUMORS OF THE TRACHEA

With Report of Two Cases

KENNETH PHELPS, M.D.

Minneapolis, Minnesota

The trachea has the completely passive function of serving as a passageway for air between the larynx and the bronchi. It has a simple structure: a membranous tube supported by incomplete cartilaginous rings, lined by mucous membrane and with no functioning muscles.

Tracheal stenosis may be caused by a number of

different conditions. The most common causes are diseases of the neighboring organs which directly compress the trachea or extend into its walls, for example, thyroid diseases, esophageal diseases, aortic aneurysm, mediastinal tumors, et cetera.

Primary diseases of the trachea are extremely rare. Not much medical attention has been paid to them. When the tracheal lumen becomes diminished, difficulty in breathing and stridor develop simultaneously. If the stenosis develops slowly there may be little difficulty in breathing and the diagnosis is not easily made. Inspiration is frequently more difficult than expiration. The dyspnea may be influenced by the patient's position in that breathing is better lying on one side than on the other or better standing up than lying down.

The two cases I am reporting were recently observed. Each had dyspnea and stridor with no disease of the heart, lungs, or larynx and each had a primary tumor of the trachea.

Case 1.—Mr. O. H., aged seventy, was referred by Dr. A. C. Lindberg. He complains of stridor with dyspnea which started one year ago. The symptoms are getting more severe and it is now difficult for him to do the hard work connected with operating his farm. He would feel fine in every respect if he could just breathe easier. There is no pain, no loss of weight, no cough, and no fever. He is not hoarse and there is no dysphagia.

Examination of his larynx is negative though a mass can be seen below the glottis, nearly filling the lumen of the trachea. An x-ray film was made by Dr. Russel Morse, who found a round smooth mass attached to the posterior wall of the trachea just below the larynx.

This tumor had the appearance of a benign polyp.

This was confirmed by Dr. Leo Rigler at the University Hospitals who also made laminograms from which slides were made.

A tracheotomy was done below the site of the tumor, under local anesthetic. Through the tube oxygen was given as intravenous pentothal was administered. It was considered safer to do the tracheotomy under novocaine, before giving the pentothal, because an open airway adds to the effectiveness and safety of pentothal. This same technique has been used in thyrotomies for early cancer of the larynx. The mucosa over the tumor was incised and the mass was shelled out with the finger and curette. The consistency was like colloid and there was no bleeding of consequence. The base was electrocoagulated and the mucosa sutured together, leaving a smooth tracheal lumen.

Dr. Bell walked into the operating room as the patient was being wheeled out and reported that the microscopic diagnosis was adenocarcinoma. The tracheotomy tube was removed in twenty-four hours and the patient's symptoms were completely relieved.

Dr. Stenstrom gave x-ray therapy. When last seen the patient had no recurrence of his symptoms.

Primary cancer of the trachea is quite rare. In one series of 2,088 tumors of the respiratory tract 748 were in the larynx but only three in the trachea.

It is most common in men (2 to 1) from forty to sixty years old. It is usually in the lower part of the trachea. It develops on the membranous structure and not the cartilaginous portion of the trachea. It develops on the surface and may be nodular or papillary and

may look like a polyp and still be a cancer. Histologically it may be a squamous cell carcinoma but it frequently starts in the mucous glands (adenocarcinoma) and often contains colloid. It rarely metastasizes early.

Case 2.—Mrs. Anna K., aged thirty-six, was referred by Dr. Alec McEwan. Her complaint is shortness of breath and stridor of four years' duration. Her symptoms are increasing in severity so it is very difficult for her to walk up a short hill to her home from the street car. The stridor was worse during pregnancy. She feels well generally except for the dyspnea. Physical examination and x-ray of her chest and larynx give negative findings.

Bronchoscopy was done under local anesthesia and a round tumor was found attached to the left wall of the trachea, near its lower extremity. It was smooth in outline and did not bleed profusely when a biopsy was taken. Dr. Bell's diagnosis was benign adenoma.

A few days later the tumor was removed bronchoscopically with forceps and followed by electrocoagulation. No recurrence has followed and symptoms are completely relieved.

Benign adenoma of the trachea was once considered adenocarcinoma but the absence of metastases and the number of individuals who recovered after removal, resulted in the reclassification of this tumor as benign.

Adenoma occurs in females a little more frequently than in males. It frequently occurs in patients under forty years of age.

The pathological diagnosis of this tumor is not easy from a small biopsy. Sometimes a typical adenoma in section will turn out to be carcinoma, or the reverse.

Anedoma occurs more frequently in the bronchi than in the trachea (as is true of carcinoma also) and may be a very vascular tumor. Hemoptysis may be the first symptom and at times the bleeding may be very severe when a biopsy is done—enough so that a transfusion may be necessary.

Two cases of tumor of trachea are reported both with long standing stridor and dyspnea, without disease of the heart, lungs, or larynx.

Discussion

DR. D. G. GARDINER, Saint Paul (by invitation): I had talked with Dr. Phelps about certain aspects of this tumor. It was glad to have him bring out the fact that some of these so-called benign tumors may be very vascular. I remember seeing a patient at Ancker Hospital twelve or fifteen years ago. Looking into the trachea I could see nothing on inspiration but when he expired this thing would pop out between the cords and the intern looking on was afraid it might hit him in the face. I knew he had a polyp of the trachea. Under anesthesia, I grasped it and he began to bleed and he bled plenty. I was quite alarmed. I was prepared to do a tracheotomy, which I did, and packed the larynx from below. He still bled. Then I did a fissure and with electrocoagulation sealed off the pedicle. The tumor was about the size of my thumb. Dr. Noble, although usually wanting a pound of flesh, when I gave him that small piece, said it was a vascular fibroma of the trachea. That patient made a very uneventful recovery. It was a very vascular benign pedunculated polyp. I have seen these in children too. One I saw at the Children's Hospital here. The child was cyanotic and dyspneic. In the receiving room

I tried to ascertain the cause. I could see this cystic laryngeal tumor which I merely ruptured and out came a lot of serous material and the child made a very dramatic recovery on the table.

As Dr. Phelps brought out, these things can be very vascular and one has to be prepared to deal with an emergency that might arise from bleeding. But carcinomata are a different story. I have not seen one of the trachea but have seen them in the bronchi. I recall some of my total laryngectomies that I have seen through to a finish. One I recall had a pedunculated carcinoma of the anterior commissure. Until you can get a satisfactory pathological specimen, I don't think you can tell whether they are benign or malignant. The first laryngectomy I did in St. Paul was for carcinoma. The tumor was broad and sessile and extended across the anterior commissure. I made up my mind after a preliminary vision of the thing that I couldn't say unless I did a laryngoscopy. That man is living and well after eight years. (Described the Bell Telephone voice box and his combination of that with the Rochester voice box.)

ESOPHAGEAL HIATUS HERNIA

JAMES B. CAREY, M.D.

Minneapolis, Minnesota

Dr. Carey, of Minneapolis, gave a paper on the above subject and showed radiographs of some cases.

Abstract

The subject of esophageal hiatus hernia was discussed by Dr. Carey on the basis of symptomatology of seven patients, roentgenographic findings of five and gastroscopic observations in two.

The matters stressed were: similarity of pain to that of peptic ulcer, cholecystitis, particularly with stones, and coronary disease. The time of occurrence, location, radiation, and relation to food are often identical for these conditions and hiatus hernia. One characteristic of hiatus hernia which distinguishes the condition from others, particularly nocturnal angina, is the relief afforded by sitting up in bed or arising and walking about, or by sleeping in a semi-upright position.

Discussion

DR. O. H. WANGANSTEEN: The terms, para-esophageal and hiatus hernia, frequently are used interchangeably. I am not well enough schooled in the pathology of the condition or adequately experienced in its treatment to know how often each situation exists. From the reports of surgeons who illustrate their techniques for the repair of the condition, one would be led to believe that the most frequent situation is a para-esophageal hernia to the left of the esophagus. There apparently is some reason for controversy over the terminology. Sauerbruch (*Deutsche med. Wchnschr.*, 58:2:1715, 1932) prefers the term para-esophageal hernia; Akerlund believes the designation hiatus hernia suffices to include all types, including the para-esophageal variety (*ibid.* p. 1795). Dr. Carey properly called attention to instances of ampullary dilatation of the lower end of the esophagus, a condition which is occasionally confused with hiatus hernia. Obviously such patients are not candidates for operation. In a previous discussion on

diaphragmatic hernia before this organization (*Minnesota Med.*, 21:290, 1938), I alluded to the controversy which occurred between Sauerbruch and his associates and V. Bergman and Akerlund over this point (*Deutsche med. Wchnschr.*, 58:1391, 1397, 1713, 1794, 1932).

We have latterly been operating upon hiatus hernia by the thoracic approach, resecting the anterior two-thirds of the ninth or tenth rib. It is amazing how much more direct this approach is. It possesses the distinct advantage of bringing the surgeon directly down upon the hernia, the apex of the diaphragmatic cupola. Every surgeon who has repaired such hernias by the abdominal approach is familiar with the difficulty of visualizing the situation from below. Satisfactory exposure as well as illumination of the operative field are difficult to obtain.

Dr. Harrington of Rochester, who has had a large experience with hiatus hernia, has pointed out that it is essentially a sliding hernia of the stomach through or in juxtaposition to the esophageal aperture. In a number of publications, Harrington has pointed out the importance of using autografts of fascia lata as suture material, suggesting that this hernia, like other sliding hernias, is subject to recurrence. In two patients operated upon recently by the thoracic approach, my associate, Dr. R. L. Varco, and I moved the esophagus outward to the left, placing it out toward the left extremity of the diaphragmatic defect. This maneuver permits a satisfactory approximation of the diaphragmatic crura behind and to the right of the diaphragm as well as of the more readily accessible portion of the defect to the left of the esophagus. Such an approximation of the crura of the diaphragm about the esophagus lends the impression that a good repair has been obtained and that a good result reasonably can be expected. Mere suture of the left para-esophageal defect, in many instances, probably fails to deal adequately with the situation, no matter what type of suture material is employed. In other words, displacing the esophagus to the right up against the weak diaphragmatic crura and closing the defect on the left does not constitute a good operation for hernia. This principle of operation in a direct inguinal hernia with a poor quality of muscle tissue would be regarded as poor surgery. It is my feeling that the type of closure described herein meets the requirements of a satisfactory operation for hernia more adequately than does the usual closure of the defect lying to the left of the esophagus. It is my practice to effect the closure of the hernial defect with silk sutures as in any other hernia repair. Granted that the *method* of closure is satisfactory, my impression is that the unabsorbable silk suture will prove just as efficacious in the repair of hiatus hernia as it already has in other difficult hernias.

DR. D. G. GARDINER, Saint Paul (by invitation): I don't think either Dr. Carey or Dr. Wangansteen has indicated what percentage of the patients they have studied have really been ready for surgery. I have seen a large number of these so-called para-esophageal affairs through the esophagoscope, and have operated upon three. What is the indication for surgery in these which show only a little pouching? I have in mind two women who have para-esophageal hernia and most of their distress is due to spasm. They have been fairly well controlled by antispasmodics which have kept them quite comfortable. Unless they are obstructed, where is the borderline and what is the indication for surgery? A lot of people complain of eructations, et cetera. I don't think one case in a hundred requires surgical approach to para-esophageal hernia. I think they can be approached without surgical interference.

DR. E. M. JONES, Saint Paul: I reported a series of diaphragmatic hernias before this society in 1938. A few of the cases in this group were of the esophageal hiatus type. One of these cases is under my care at

IN MEMORIAM

the present time. When she first came under observation in 1936, we made a diagnosis of an esophageal hiatus hernia. She obtained no relief from the non-operative measures employed, and she was operated upon. The postoperative x-ray study showed that the repair was holding, and her symptoms subsided. She was well for two years, and then she had a recurrence of symptoms. X-ray study showed a recurrence of the hiatus hernia. She came for treatment again a year ago. Her weight at this time had increased to 220 pounds. X-ray investigation showed an ampulla at the lower end of the esophagus and also a small recurrent hiatus hernia. She has improved under medical management, and I hope her improvement is permanent. If, however, she has a recurrence of symptoms in spite of the medical regime, I feel that surgical repair will again have to be undertaken.

Dr. CAREY, in closing: The answer to the question concerning indications for operation for patients with hiatus hernia is implicit in the outline of treatment. In other words, if the patient is relieved by simple measures, there is no necessity for operation. These small herniae seldom become incarcerated. Light meals, particularly at night, avoiding constipation or anything which would give rise to increase of intra-abdominal pressure, reduction in weight, and, most important, the semi-upright sleeping position, are the basic therapeutic measures. If the patients are comfortable with this regime, there is no necessity for an operation.

Dr. Stuart Harrington advised that the left diaphragm be paralyzed before operation, and also suggested phrenic exeresis as remedial measures for patients who cannot tolerate operation. Such procedure will diminish the possibility of incarceration of the hernia. Heartburn, eructations, and such minor symptoms arise from irritation of the esophageal mucosa by gastric secretion which collects in the pouch. Bleeding may occur when the hernia becomes incarcerated.

We have examined about twelve of these patients this year and I have seen no reason for operation for any of them. All of them have been relieved of their symptoms caused by the hernia by the measures outlined.

I have not seen spasticity or cardiospasm in relation to esophageal herniae. Most of them are of the ordinary para-esophageal type in which the esophagus is actually more relaxed and patulous than usual. Many of these patients have no symptoms at all; we do not know how many there are because, unless some symptom suggests the necessity for examining the lower esophagus, that condition is not discovered. If hernia is found by routine examination and subsequent questioning reveals none of the cardinal symptoms of esophageal hernia, there is no occasion to do anything about it.

The meeting was adjourned.

ERLING W. HANSEN, M.D.
Secretary

In Memoriam

MARION M. HURSH

Dr. Marion M. Hursh of Hibbing, Minnesota, died January 20, 1945 at the age of sixty-seven after a long cardiac illness.

Dr. Hursh was born in Maple Plain, Minnesota, March 8, 1877. He grew up in Henning in Ottertail County. He received his college education at Hamline College, Saint Paul and obtained his M.D. from Hamline Medical College in 1908. He interned at Deaconess Hospital in Minneapolis, and took some post-graduate work at Tulane University.

Dr. Hursh located in Itasca County more than thirty-five years ago, having lived at Grand Rapids for many years and at Cohasset before moving to Hibbing in 1939.

He was a captain in World War I and a member of the American Legion. While living in Cohasset he served as county commissioner for a term. A preacher as well as a physician he ministered to spiritual as well as bodily needs. His obstetrical practice numbered over 3,000 cases.

Dr. Hursh married Anna M. Gooch, a former missionary to Burma. All three sons are physicians. Douglas is a medical missionary in Nigeria, Africa. Lawrence is a major in the armed forces in Luxembourg, while Philip is a lieutenant with the medical corps in the Philippines. Besides his family, Dr. and Mrs. Hursh raised three nieces, one of whom is a prisoner of the Japs in the Philippines.

CARL HENNING MATTSON

Dr. Carl Henning Mattson was born in Willmar, Minnesota, June 7, 1901, the oldest child of Arvid and Gerda Mattson. When he was small, the family moved to Saint Paul where he attended grade school and Mechanic Arts High School.

He entered the University of Minnesota and received his medical degree in 1930. During his medical school days he worked his way through school, supporting not only himself but his family, as his father was frequently out of work. In spite of that he graduated as an "A" student and was made a member of the Alpha Omega Alpha honorary medical fraternity. He had a year's

(Continued on Page 240)



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internship at Ancker Hospital followed by a year as a resident.

In 1931, he started practice in St. Paul. He was married to Ann Rolig on October 15, 1932. In 1937, he went to Duluth and practiced there for a year and a half, returning to St. Paul in 1939 where he remained until entering the Navy.

He was Chief of Staff of Bethesda Hospital in 1940 and a member of the Board of Directors from 1939 to 1943.

In 1943, he became a member of the American College of Surgeons and in September of the same year he entered the Navy as a Lieutenant Commander.

In May, 1944, he was attached for duty with the U. S. Naval Base Hospital in the Admiralty Islands. In December, 1944, he was attached to the U.S.S. Ozark. When the Luzon push started, he was with the Navy on the Lingayin Gulf, but the mortality was less than anticipated so on January 14, Dr. Mattson was sent to Leyte.

On January 15, he, with nine corpsmen, was to fly back to the Base Hospital on the Admiralty Islands. Five minutes after their plane took off it was crashed into by another plane which sheared the tail off causing it to fall out of control and crash to the ground. All persons in the plane were killed.

He is survived by his wife, Ann, two daughters, Karen, 8, and Ruth 6, his parents and two sisters, Hildur, and Mrs. Leo Kopp of Omaha.

He was one of the finest physicians, a real gentleman. This death is a loss to the profession as a whole and to the Ramsey County Medical Society. He was the first member of the Ramsey County Society to die in this war or the last war.

OLOF I. SOHLBERG, M.D.

THORVALD PETERSEN

Dr. Thorvald Petersen, a practitioner in Minneapolis since 1913, died January 22, 1945 at the age of sixty-two.

Dr. Petersen was born in Fyn, Denmark, February 24, 1882. Receiving his common school education in Denmark, he came to America and attended college at Danebo College in Tyler, Minnesota, and Grand View College in Des Moines, Iowa. He obtained his M.D. degree at the University of Illinois in Chicago in 1911. After interning at Swedish Hospital, Minneapolis, he practiced four years at Gaylord, Minnesota, until 1914 when he moved to Minneapolis.

Dr. Petersen was a brother of Hjalmar Petersen, former governor of Minnesota. He was a member of the Hennepin County Medical Society, the Minnesota State and American Medical Associations, the Minneapolis Surgical Society and the Masons. Two sons, Captain Robert T. and Lt. Glenn L. Petersen, survive him.

MINNESOTA MEDICINE

IN MEMORIAM

RALPH WALLACE WARNOCK

Ralph Wallace Warnock was born at Altona, Illinois, on March 29, 1891, and died suddenly at his home on October 1, 1944. His father, John Fremont Warnock, a railroad man, and mother, Leona Maude Bone, reared him through his grade-school period on a farm at the place of his birth, and in 1907 he graduated from the Altona High School. After this the illness of his sister caused a five-year suspension of all his plans and also influenced him in his decision to study medicine although his parents desired his entry into the ministry, for which he was offered a scholarship by the Christian Church. Accordingly, he prepared himself by entering the Drake University in the Fall of 1913 and graduated in June, 1917. Throughout his college career he distinguished himself in many ways. He attained scholastically most of the highest honors in spite of the handicap of the necessity of working his own way. This did not deter him from engaging successfully in the social and athletic activities of his school. He was Drake's first nine-letter man in football, basketball, and track and was a member of many collegiate societies, notably a charter member of Phi Beta Kappa, all of which served to develop his later life.

He entered the University of Minnesota Medical School in the Fall of 1917. Here again in his very unassuming way he combined his scholastic work with many extracurricular activities to round out to its fullest enjoyment a hard-earned and well-deserved education. In this period World War I, as it did with so many others, found him serving in the Medical Reserve of the Student Army Training Corps. The following Fall he again entered the athletic field and won his letter in football. He was a member of the Nu Sigma Nu Fraternity. He graduated in 1921, following which he served a junior and senior internship of twenty-seven months at the Minneapolis General Hospital. Then in 1922, Dr. Harold Richardson of St. Paul was instrumental in bringing him into the office of the late Dr. Charles Lyman Greene, a nationally and internationally known internist and cardiologist. He was associated with them and also later with Dr. Joseph F. Borg of St. Paul until Dr. Greene's death in 1929. He was married in 1923, shortly after his association with Dr. Greene, to Viola McLain of Des Moines, Iowa.

He was a member of the American Medical Association, Minnesota State Medical Association, Ramsey County Medical Society, Minnesota Society of Internal Medicine as well as of the American Therapeutic Society. He was also a diplomate of the American Board of Internal Medicine, clinical instructor in Medicine at the University of Minnesota, and at the time of his death Chief of Staff at St. Luke's Hospital, Saint Paul.

His hobbies were chess, fishing and photography.

His was a self-effacing, unselfish personality, sincere in his work and devoted to his family. Professionally he was well known to all of us for his many attributes—his gentleness, his even-tempered manner, and his deep understanding.

He is survived by his wife and two daughters, Margaret Ann and Jeanne, his mother, Leona Maude Warnock, a sister, Fannie B., and a brother, Carroll.

D. G. GARDINER, M.D.



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GOODHUE COUNTY

The Goodhue County Medical Auxiliary held a meeting on December 19 in conjunction with the Goodhue County Medical Society. Dinner was served at the St. James Hotel in Red Wing. Following the dinner, meetings were held by both organizations.

On January 11 the regular meeting of the Auxiliary was held at the home of Mrs. W. W. Liffbrig. Following a business meeting the afternoon was spent in making dressings for Our Lady of Good Counsel Free Home. Refreshments were served by the hostess.

* * *

A meeting of the Goodhue County Medical Auxiliary was held February 7 at the home of Mrs. R. V. Sherman, Red Wing, Minnesota. Although a small group was present, the afternoon was spent in making dressings for Our Lady of Good Counsel Free Home and the packing of a box of supplies for the Medical and Surgical Supply collection.

Mrs. G. C. Kimmel, president, stressed the importance of the radio programs, "Doctor's Look Ahead," which are presented by the National Broadcasting Company and the American Medical Association.

MOWER COUNTY

The Woman's Auxiliary of the Mower County Medical Society held a regular meeting in December at the home of Mrs. L. G. Flanagan.

The program of the afternoon was composed of a paper entitled "Public Relations" by Mrs. S. Dale Spotts, an article on postwar planning by Mrs. Rollo K. Packard, given by Mrs. P. A. Lommen, and another article "Accidents—Greatest of All Killers" by Austin E. Smith, given by Mrs. J. G. W. Havens.

Refreshments were served by the hostess during the social hour.

Mrs. W. B. Grise, Mower County Junior Red Cross Chairman, a member of the Auxiliary, was presented with the receipts of the Junior Red Cross membership drive at a ceremony which took place in the Austin High School. Mrs. Grise was a guest instructor representing the Junior Red Cross at a Hi-Y meeting held at the high school. The boys made menu covers and cut duffel bag strings. The members of the Hi-Y club passed a resolution aimed to boost interest in Junior Red Cross work and provide contributions to the program.

* * *

Mrs. L. G. Flanagan presented a paper entitled "Physical Fitness for America" by Morris Fishbein at the

January meeting. Mrs. W. B. Grise was hostess at her home.

During the business session the Auxiliary decided to become members of the co-ordinating council with Mrs. Grise as representative. All were urged to make use of the weekly series of dramatized programs, "Doctor's Look Ahead," by the National Broadcasting Co.

Refreshments were served by the hostess during the social hour.

REPORTS and ANNOUNCEMENTS

MEDICAL BROADCAST FOR MARCH

The following radio schedule of talks on medical and dental subjects by William O'Brien, M.D., Director of Postgraduate Medical Education, University of Minnesota, is sponsored by the Minnesota State Medical Association, the Minnesota State Dental Association, the Minnesota Hospital Association and the University of Minnesota School of the Air.

March 3—9:15 A.M.—WCCO	*Industrial Medicine
March 3—11:30 A.M.—WLB-KROC	Medicine in the News
March 7—11:00 A.M.—WLB	Sunlight and Health
March 10—9:15 A.M.—WCCO	*Occupational Diseases
March 10—11:30 A.M.—WLB-KROC	Medicine in the News
March 14—11:00 A.M.—WLB	Healthy Minds and Healthy Bodies
March 17—9:15 A.M.—WCCO	*Health of Women in Industry
March 17—11:30 A.M.—WLB-KROC	Medicine in the News
March 21—11:00 A.M.—WLB	Mental Hygiene
March 24—9:15 A.M.—WCCO	*Control of Contagious Disease in Industry
March 24—11:30 A.M.—WLB-KROC	Medicine in the News
March 26—4:15 P.M.—WCCO	Rest and Sleep
March 28—11:00 A.M.—WLB	Your Hospital in Wartime
March 31—9:15 A.M.—WCCO	*Dentistry for the Workers
March 31—11:30 A.M.—WLB-KROC	Medicine in the News

*Keyed with subject of the month—Minnesota State Medical Association Packet of Information for Members.

E. STARR JUDD LECTURE

The twelfth E. Starr Judd lecture will be given by Dr. Allen O. Whipple, Professor of Surgery, Columbia University, Tuesday evening, April 10, 1945, at 8:15 in the Museum of Natural History Auditorium, University of Minnesota. The subject will be "The Problem of Portal Hypertension in Relation to Hepato-Splenopathies."

The late E. Starr Judd, an alumnus of the Medical School of the University of Minnesota, established this annual lectureship in Surgery a few years before his death.

WASHINGTON COUNTY SOCIETY

A joint meeting of the members of the Washington County Medical Society and the Staff of the Lake View Memorial Hospital in Stillwater, was held February 13, 1945.

Francis W. Lynch, M.D., of Saint Paul, the guest speaker, gave a lecture on "Common Dermatologic Conditions" which was profusely illustrated. An hour well spent in looking and listening.

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REFERENCES — 1 West, J. Surg. & Gyn., 51:150, April, 1943. 2 Clin. Med. & Surg., 46:327, August, 1939. 3 Med. Rec., 155: 216, 1942. 4 Crossen, H.S. R. J.: Diseases of Women, C. V. Mosby Co., St. Louis, 9th ed., 1941.

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◆ Of General Interest ◆

Dr. O. C. Braun was appointed health officer for Nashwauk at the meeting of the village council on January 19.

* * *

Dr. L. E. Prickman, Mayo Clinic, presented a motion picture entitled "Functional Dyspnea" at the Forum on Allergy held in Pittsburgh on January 29.

* * *

Dr. P. C. Petersen, of Braham, has purchased the practice of the late Dr. A. A. Peterson in Mora and will maintain offices in both places.

* * *

Dr. L. A. Veranth, St. Cloud, has moved into his new offices in the building which he purchased several months ago and which has been remodeled into a completely modern structure.

* * *

Dr. John T. Leland, formerly of Herman, Minnesota, is now located at 3 Madrona Street, Mill Valley, California. Dr. Leland is on the staff of the Marine Ships Hospital, Sausalito, California.

* * *

Dr. H. O. McPheeters, Minneapolis, was guest speaker at the regular monthly meeting of the Brooklyn Surgical Society on February 1. Dr. McPheeters' sub-

ject was "Sapheno-Phemoral Ligation, with the Immediate Retrograde Sclerosing Injections." Dr. McPheeters read the same paper before the Los Angeles Surgical Society on February 9.

* * *

Dr. R. C. Radabaugh of Hastings attended the General Surgical Course of the Cook County Postgraduate School of Medicine and Surgery in Chicago in the month of November.

* * *

Dr. Charles R. Drake, Minneapolis, was elected president of the Minnesota School Board Association at its business session which replaced the annual convention at the Hotel Lowry, Saint Paul, February 7, 1945.

* * *

Dr. C. A. Van Slyke, a member of the board of directors of Swift County Hospital, Benson, was re-elected treasurer of the hospital at the annual meeting of the Hospital Association.

* * *

Dr. H. I. Lillie, of the Mayo Clinic, was the presiding officer at the Council Meeting of the American Laryngological Association in New York City. While in New York Dr. Lillie also attended a number of surgical clinics.

(Continued on Page 246)

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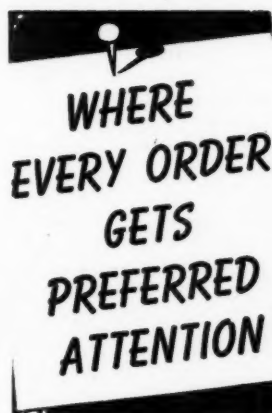
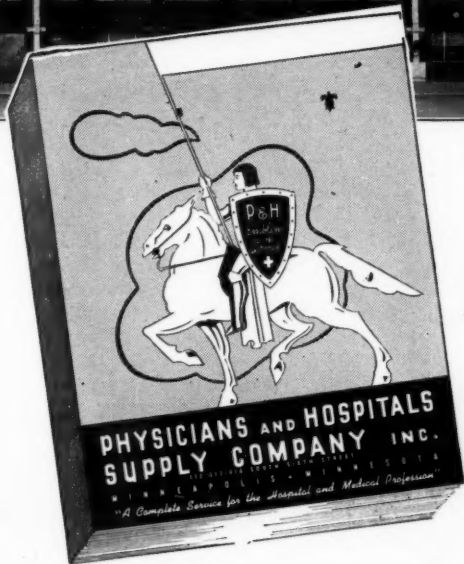
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The following officers were elected at the annual staff meeting of St. Barnabas Hospital, Minneapolis: Dr. Carl O. Rice, chief of staff; Dr. James S. Reynolds, vice chairman; Dr. H. F. Bayard, secretary-treasurer. Dr. H. D. Diessner was made a member of the executive committee.

* * *

Dr. D. R. Nichols, Mayo Clinic, recently attended a conference in Washington, D. C., of a group interested in the prolongation of the action of penicillin. The meeting was held under the direction of the Committee on Chemotherapeutics and Other Agents of the National Research Council.

* * *

Dr. Kenneth Kelley, Minneapolis, will open offices in Menahga some time in April. A graduate of the Minnesota University Medical School, Dr. Kelly interned at the Swedish Hospital in Minneapolis in 1944 and will complete his residency there in the spring.

* * *

Dr. R. K. Ghormley, Mayo Clinic, assisted with the examinations at the meeting of the American Board of Orthopedic Surgery in Chicago. While there Dr. Ghormley also attended a meeting of the Postgraduate Committee on Orthopedic Training, of which he is chairman.

* * *

Captain James Eckman, who is on leave from the Division of Publications, Mayo Clinic, and is now serving in the Medical Intelligence Division, Preventive Medicine Service Office of the Surgeon General, United States Army, has been elected to the Medieval Academy of America.

* * *

Dr. Milo P. Gerber was elected chief of staff of St. Joseph's Hospital, Brainerd, at the annual dinner meeting. Dr. O. E. Hubbard was made vice chief and Dr. V. E. Swanstrom, secretary-treasurer.

Guest speakers at the meeting were Dr. M. G. Gillespie and Dr. F. J. Hirschboeck, both of Duluth.

* * *

Dr. J. A. Bargen, Rochester, delivered the annual Beaumont Lecture in Detroit, Michigan, on February 12. While away, Dr. Bargen also addressed the faculty of Southwestern University and the Dallas Medical Society, in Dallas, Texas, and the faculty of the Medical School of the University of Texas at Galveston.

* * *

Dr. A. G. Giroux, formerly of Taylors Falls, is now practicing in North Mankato, where he is associated with Dr. H. J. Nilson. A graduate of the University of Montreal Medical School, Dr. Giroux has been practicing for the past twenty-five years and before going to Taylors Falls lived in Duluth and at Moose Lake.

* * *

Dr. A. F. Kemp was elected president of the Blue Earth County Medical Society at their meeting in Mankato on January 31. The new vice president is Dr. P. G. Hooper, and Dr. A. A. Schmitz is secretary-treasurer. After the business meeting and general dis-

(Continued on Page 248)



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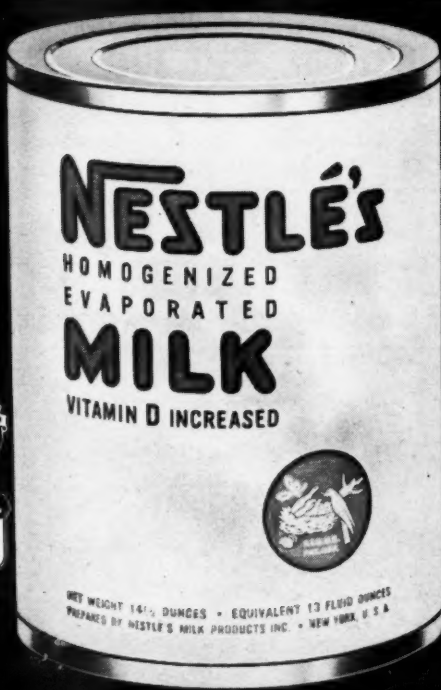
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OF GENERAL INTEREST

cussion, members of the society were the guests of the new officers at a stag luncheon.

* * *

Captain George Berryman, Sn. C., formerly a fellow in physiologic chemistry at the Mayo Foundation, is now commanding officer at the Medical Nutrition Laboratory in Chicago. Previously the laboratory was included in the Army Medical School at Washington, D. C. When a new building now under construction in Chicago has been completed, the laboratory will also engage in physiologic, chemical and bacteriologic studies.

* * *

The advisory board of St. Joseph's Hospital, Saint Paul, elected Dr. H. R. Tregilgas chief of staff for 1945. The retiring chief of staff is Dr. Max Alberts.

Dr. Tregilgas, who is a resident of South Saint Paul, has been a member of St. Joseph's staff for a number of years and has served on the advisory board for the past five years.

* * *

Captain James Eckman, on leave from the Division of Publications, Mayo Clinic, was guest speaker at the February 19 meeting of the Johns Hopkins History Club. His subject was "Jerome Cardan, Italian Physician and Mathematician of the Sixteenth Century." Captain Eckman is attached to the Office of the Surgeon General, United States Army.

* * *

Captain Waltman Walters, who has recently returned from a tour of duty in the South Pacific area, has been

appointed chief of surgery for the U. S. Naval Hospital at Philadelphia. In recognition of this appointment a biographical article about Captain Walters was published in *Sky-lines*, the news bulletin of the U. S. Naval Hospital at Philadelphia, for January 31, 1945.

* * *

Dr. O. L. McHaffie was elected chief of staff of St. Luke's Hospital, Duluth, succeeding Dr. L. L. Meriman, at the annual staff meeting the middle of January. Dr. A. C. Hilding is chief of staff-elect, and the executive committee includes Drs. W. A. Coventry, C. O. Kohlbray, Archie Olson, A. J. Wells, P. G. Boman, F. H. Magney, A. L. Abrahams, and Selma Mueller.

* * *

Continuance of the Pequot Lakes Maternity Hospital, threatened with closing because of rapidly-mounting expenses with no appreciable increase in revenues, now seems assured. Dr. T. E. Eyres has agreed to furnish the building with heat, light, water, electricity, and supplies, and the local Commercial Club and other organizations will help pay the salary of a superintendent.

* * *

Dr. J. R. McNutt succeeded Dr. Richard Bardon as chief of staff of St. Mary's Hospital, Duluth, February 1. Dr. J. E. Power was named as Dr. McNutt's successor for 1946. Other officers elected were Dr. K. R. Fawcett, secretary; Dr. F. J. Elias, chief of surgery; Dr. R. E. Nutting, chief of pediatrics; Dr.

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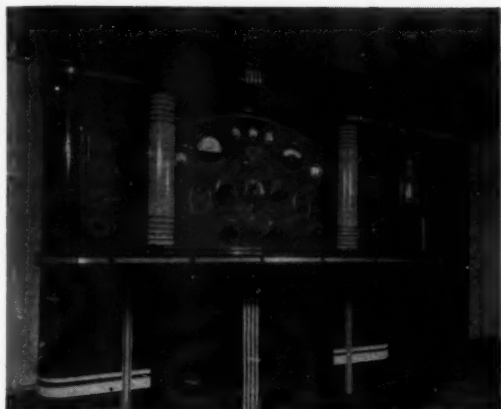
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C. W. Taylor, chief of contagion; Dr. L. E. Schneider, chief of neurology; Dr. J. R. Manley, chief of obstetrics, and Dr. R. J. Eckman, associate in obstetrics.

Drs. F. J. Hirschboeck, chief of medicine, W. E. Hatch, chief of urology, F. N. Knapp, chief of eye, ear, nose and throat, S. S. Houkom, chief of orthopedics, and E. L. Touhy, chief of laboratories, continue in office.

Dr. Ralph Knight, associate professor of surgery and anesthesia, University of Minnesota, was the guest speaker at the dinner which preceded the business meeting.

* * *

Hennepin County Medical Society elected Dr. Orwood J. Campbell president at their recent meeting for the election of officers. Other officers elected were Dr. L. R. Jones, first vice president; Dr. R. S. Ylvisaker, second vice president; Dr. C. D. Creevy and Dr. R. W. Morse, board of directors; Dr. A. H. McFarland and Dr. F. R. Hirschfield, board of censors; Dr. J. A. Johnson and Dr. C. A. McKinlay, board of ethics; and Dr. T. J. Kinsella and Dr. T. A. Peppard, board of trustees.

Drs. E. S. Platou, S. H. Baxter, C. A. McKinlay, C. A. Borman, and L. A. Lang were named delegates to the Minnesota State Medical Association.

In his address at the twenty-third annual foundation dinner of the Minneapolis Surgical Society on February 2, at the Radisson Hotel, Dr. Arthur Wilburn, Harvard Medical School, explained his technique for the construction of new bile ducts from pieces of intestines in cases where he has found it necessary to replace ducts destroyed by cancer or inflammation. Dr. Wilburn, who is lecturer on surgery at Harvard and chief of the surgical service at Massachusetts General Hospital in Boston, has performed eight such operations and all have been successful.

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Communications

Overseas
January 30, 1945

Dear Dr. Jones:

It's been a long time since I have written; my apologies for such neglect. It seems this war is a continuous process of either feverishly preparing for an operation or being in the middle of one. Neither period seems conducive to letter writing.

Then censorship forbids telling of interesting things that happen, so one ends up, it seems, with not a good letter.

This present operation seemed to take an interminably long time, yet it wasn't quite as rugged as the Attu operation. For the first time we were subjected to strafing and bombing raids to include a paratroop attack, so all in all it had its moments.

The natives here are poor beyond description. Clothing is a critical item with them. Apparently this area has always been dependent on the importation of cotton and when the Japs took over, they commandeered all cotton cloth. The natives say they haven't been able to get a piece of cotton cloth for two years, so you can imagine what sort of tattered brief clothing they have to wear. The majority haven't worn shoes for two years.

From talks with the natives I get the impression that the Japs robbed and abused them to the full extent. Any newspaper stories coming out of this area regarding Jap atrocities are more than true. It is hard to understand why those stories are apparently minimized to the people back home.

One thing the Japs have succeeded in doing here is to build up a terrible hatred against the Japanese which the Filipino will carry with him for a long time to come.

On the many occasions when we are able to take Jap prisoners, we have to protect them from the natives.

In talking to some of the Filipino leaders I get the impression that they will never dare accept independence. Because of their strategic location and their natural resources, they will always fear China and Japan and probably their best out is the benevolent protection of Uncle Sam.

In general, the outlook for the war's end in this theater gets better daily. I would guess from here that it could end six to twelve months after termination of the European War.

In general, the morale of doctors in field units is not too good. On the average, it is going on three years that they have been out of touch with any sort of medicine. They wonder what is to become of them after the war. Will there be residencies or an opportunity for them to take work in teaching hospitals. On the salary of a Captain, a doctor cannot save enough to allow him to spend much time in further study when he gets back.

In this war the hero doctor is the battalion surgeon; perhaps not because he saves lives in the front lines, but because he is continually exposed to danger and because his presence in the front lines supports the morale of the troops; the soldier knows someone will take care of him if he is hit.

I can well imagine you are worked to death around there. Sure wish I could be with you, feel I'm missing a lot of learning.

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COMMUNICATIONS

At present I am a Division Surgeon which means my duties are largely administrative and you might say preventive medicine.

Occasionally I get MINNESOTA MEDICINE and it is with a great deal of pleasure I read your "President's Letter." They are excellent. Congratulations on being President, and congratulations on the "letters." I point with pride to these "President's Letters" for the benefit of the medical officers around here.

At least you can't say I never write, say almost never. I say again I shall try to do better in the future.

Sincerely,

BYRON B. COCHRANE

Dr. Byron B. Cochrane interned at the Miller Hospital, Saint Paul, and practiced in Saint Paul before entering the service. He is now a Lieut. Colonel and Division Surgeon at the age of thirty-three.—EDITOR.

Somewhere in Italy
January 20, 1945

Dear Dr. Roberston and Fellow Members of the
Mower County Medical Society:

A 1945 membership card for the Minnesota State Medical Association and the Mower County Medical Society just arrived with my name on it. I believe that I owe thanks to you members of the society who are still carrying on at home. That's a mighty fine thing for you gentlemen to do and believe me your efforts are appreciated on this end of the line.

It will not be too many months from now before one year will have been spent on foreign soil. Am not permitted to mention exact dates.

The place where I am at did have two doctors at-

tached but recently the other man returned to the States so I have the work alone. It isn't difficult and can easily manage. The civilians have a hard time getting medical attention and a much more difficult time getting medicines. Many of them come out here for treatment and we are allowed to use our discretion as to how many to handle. If one did not have some limitations he could be doing a land office business on civilians alone. We never turn down any emergencies. Every once in a while someone will come in there with the name of some drug and wants medicine for someone in some nearby town and of course there is no dice with a deal of that sort. If you give them a chance they will take advantage of you for all that you have and then grumble because you ran out of supplies. Not all are that way, however. Many of them, in order to show their appreciation for what has been done, will invite you to their homes for a meal and that really is the payoff. It takes some fast talking to get out of going on these invitations. It is the better families that extend such offers and they do have nice homes but the sanitation is not quite up to where one would enjoy sitting down and partaking of their victuals. When you do go to a place of that sort the meal lasts for about two hours. I can sling enough of the lingo plus the use of the hands to convey a few ideas so can get along fairly well. Wine seems to be a must with every meal, and when you do eat out you make it a point to drink the wine in hopes it will cancel out some of the bugs that are in the other food.

There is a considerable amount of flying connected with my work and so far have been over practically the entire country. I have been flying as copilot for nearly six months. More than once it would have been a lot more pleasant to have been on the ground.

The weather here is very much on the damp side with rain nearly each day. There is a lot of snow on the mountains, but none at this place.



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GYNECOLOGY—Two-week Intensive Course, April 23, June 18. One-week Personal Course in Vaginal Approach to Pelvic Surgery, April 2, May 21.

OBSTETRICS—Two-week Intensive Course, April 9, June 4.

ANESTHESIA—Two-week Course in Regional, Intravenous and Caudal Anesthesia.

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The food situation for Army personnel is good considering the problem of transportation. C rations hit the table for many of the meals and that is one item that will definitely be off the list for keeps when this is over and Spam is a long way from being appetizing to the hungry eye. On at least one occasion and often two during each week we have either steak, beef roast (if the meat is too tough to fry) and chicken. Naturally when these meals come along there is a complete sell out from the kitchen. Occasionally we also get ice cream and that always is a treat even though it is made from canned milk. We get from five to six packages of cigarettes per week, one cigar, two bottles of coke and three beers. There always are at least three candy bars per week, and one package of gum.

Thanks again to all of you for being so kind to take care of my membership in the society.

With best wishes,

CARL L. ECKHARDT, Captain, MC

Netherlands East Indies
9 February 45

Dear Dr. Ouilette:

It may be of interest to you as to what duties the many pediatricians who are temporarily in the Army perform. My chief of medical service is a pediatrician, one pediatrician is doing dermatology, one was a dispensary officer, one cares for communicable diseases. As unlikely as it may seem that pediatricians are of value to the Army, all of those I know have very excellently filled an important position. The only field into which none have entered has been surgery.

Probably of some interest to you will be some description of General Hospitals overseas. The one I command is much like all others and is almost completely housed under canvas. It is a little larger than usual in that we are able to take care of more than two thousand patients, and at times have been filled. Other than the psychoneurotic wards, surgery, x-ray and clinics, which are made of prefabricated tropical type buildings, nothing here is permanent. A large amount of the construction is carried on by our own troops, supervised by our officers. I am sure that many of them, when they return to civil life, will continue to carry with them the building, plumbing, electrical wiring urge. They will have learned the cruder crafts to pass any idle moments that practice will permit them. It is surprising to me that during times of construction and setting up of a hospital these officers are happier than when only doing professional work. I think the fever of it all infuses their blood streams. All types of cases are given definitive treatment overseas unless in some rare case the facilities do not exist. An amazing thing is that despite the inconveniences of a temporary hospital the mortality rate is well below .05 per cent. The hospitals of this type are usually established for not more than six months before they move forward to areas more recently subjugated. They are, however, never very near to the scene of battle.

The immediate surroundings here appear very much like the pictures seen in tourist advertisements for the South Seas. The only quality lacking is civilization. We shall all be quite glad to see towns and cities again even though they may not be in our own country.

I greatly appreciate all that you have done for my children and trust that once the war is over and I again return to the United States I may have the pleasure of making your personal acquaintance.

Kindest personal regards,

V. R. HIRSCHMANN, Lt. Col., MC

MINNESOTA MEDICINE

BOOK REVIEWS

BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical Libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

CONTROL OF PAIN IN CHILDBIRTH. Clifford B. Lull, M.D., F.A.C.S., Clinical Professor of Obstetrics, Jefferson Medical College, Assistant Director Philadelphia Lying-In Unit, Pennsylvania Hospital; and Robert A. Hingson, M.D., Surgeon, United States Public Health Service, Director Postgraduate Medical Course, Philadelphia Lying-In Unit, Pennsylvania Hospital. Introduction by Norris W. Vaux, M.D., Obstetrician in Chief, Philadelphia Lying-In Unit, Pennsylvania Hospital. 356 pages. Illus. Price, \$7.50 cloth. Philadelphia: J. B. Lippincott Co., 1944.

A TEXTBOOK ON PATHOLOGY OF LABOR, THE PUERPERIUM AND THE NEWBORN. Charles O. McCormick, A.B., M.D., F.A.C.S. Clinical Professor of Obstetrics, Indiana University School of Medicine; Consulting Obstetrician of William H. Coleman Hospital for Women, Indianapolis City Hospital and Sunny Side Sanitarium. 399 pages. Illus. Price, \$7.50, cloth. St. Louis: C. V. Mosby Co., 1944.

THE ABORTION PROBLEM. Proceedings of Conference held under the Auspices of the National Committee on Maternal Health, Inc., at New York Academy of Medicine, June 19 and 20, 1942. Howard C. Taylor, Jr., M.D., Conference Chairman. 182 pages. Baltimore: Williams & Wilkins Co., 1944.

ARTERIAL HYPERTENSION—Its Diagnosis and Treatment. Irvine H. Page, M.D., and Arthur Curtis Corcoran, M.D. Research Division of the Cleveland Clinic Foundation, Cleveland; formerly Lilly Laboratory for Clinical Research, Indianapolis City Hospital, Indianapolis. 352 pages. Illus. Price, \$3.75, cloth. Chicago: Year Book Publishers, 1945.

THE MARIHUANA PROBLEM IN THE CITY OF NEW YORK. Sociological, Medical, Psychological and Pharmacological Studies. Mayor's Committee on Marihuana. 220 pages. Illus. Price, \$2.50, cloth. Lancaster, Pa.: Jaques Cattell Press, 1944.

APPROVED LABORATORY TECHNIC. Clinical Pathological, Bacteriological, Mycological, Virological, Parasitological, Serological, Biochemical and Histological. Fourth Edition. John A. Kolmer, M.S., M.D., Dr.Ph., Sc.D., M.D., L.H.D., F.A.C.P. Professor of Medicine in the School of Medicine and the School of Dentistry, Temple University; Director of the Research Institute of Cutaneous Medicine; formerly Professor of Pathology and Bacteriology, Graduate School of Medicine, University of Pennsylvania; and Fred Boerner, M.D. Associate Professor of Clinical Bacteriology, Graduate School of Medicine and Assistant Professor of Bacteriology, School of Medicine, University of Pennsylvania; Bacteriologist, Graduate Hospital, Philadelphia. 1017 pages. Illus. Price, \$10.00, cloth. New York: D. Appleton-Century Co., 1945.

GYNCOLOGICAL AND OBSTETRICAL UROLOGY. Houston S. Everett, M.D., Associate Professor of Gynecology, Johns Hopkins University. Baltimore: 17 pages. Illus. Price \$6.00. Williams & Wilkins Co., 1944.

This volume of 500 pages is a complete compilation of all the various urological conditions found in women with or without concomitant gynecologic and obstetrical

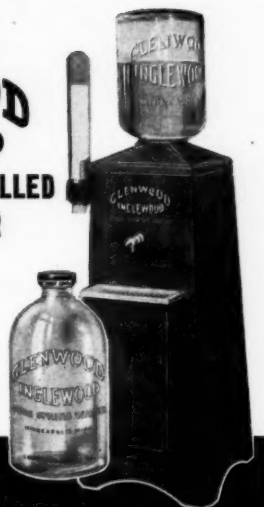
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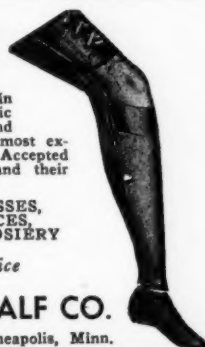
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conditions. All obstetricians and gynecologists know that their patients often have urologic complications which must be treated, and many times urologic disease and symptoms must be differentiated from pelvic disease. In this volume they can find a discussion of all such conditions, the author's extensive experience in the special urologic clinic of the gynecology department at the Johns Hopkins Hospital being the prime source of his experience. He includes a chapter on the use of the Kelly direct vision cystoscope which is used in that clinic.

Among the surgical procedures described and illustrated are operations for vesical, ureteral and urethral fistulae, operations for incontinence, transplantation of ureters, ureteral strictures and hydronephrosis, congenital anomalies, tumors and nephropexy. Most of these procedures are well illustrated.

Infections of the urinary tract are well discussed along with methods of treatment, including recent developments in chemotherapy.

This is a compact and complete discussion of urology as it pertains to female patients. It should be a very useful text for gynecologists and obstetricians as well as general practitioners and students.

SELMA C. MUELLER, M.D.

MEDICAL USES OF SOAP. Edited by Morris Fishbein, M.D. A Symposium. The authors: G. Thomas Halberstadt, B.S.Ch.E., C. Guy Lane, M.D., Daniel J. Kooyman, Ph.D., Marion B. Sulzberger, M.D., Rudolf L. Baer, M.D., Theodore Cornbleet, M.D., Carey McCord, M.D., Lester Hollander, M.D., Morris Fishbein, M.D., Irvin H. Blank, Ph.D. 182 pages. 41 illus. Price, \$3.00, cloth. Philadelphia: J. B. Lippincott Company, 1945.

The authors have presented their own views, with disregard for duplication. The repetition adds clarity and impressiveness. This treatise presents SOAP in such an entirety, that one becomes soap-conscious as never before.

The subject matter includes: Soap Technology, Usual or Normal Effects of Soap on The "Normal" Skin, Unusual or Abnormal Effects of Soap on the "Normal" Skin, The Effects of Soap on the Abnormal or Diseased Skin, The Effects of Soap on the Hair, Soaps for Industry and the Industrial Worker, Soap for Shaving, Cutaneous Detergents Other than Soap, and The Medical Uses of Soap. It offers a further challenge, among other fields, to research in: allergy; detergency, relative to the bacteriology of staphylococci, typhoid bacilli, and colon bacilli; detergency in surgical technique, especially relative to hypersensitiveness or allergy; the field of rosin substitutes in summer camp dermatitis therapy, in view of the shortage of available supply of such needed soap; and to the establishment of a specialty of Detergent Medicine with Certification by The American Board of Detergists.

This collection of articles is timely and the book is a splendid chemical, physical, industrial, and clinical presentation. May the second edition soon appear with condensation of the present material and with added chapters in the further research. It will be awaited with interest. Congratulations to the editor and the authors.

LILLIAN L. NYE, M.D.

MINNESOTA MEDICINE